

TITLE
of
THESIS

THE LAWS OF SOUND GOVERNING THE
SANTAL, BASQUE & ZULU LANGUAGES .

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SOUNDS in SANTALI, BASQUE & ZULU .

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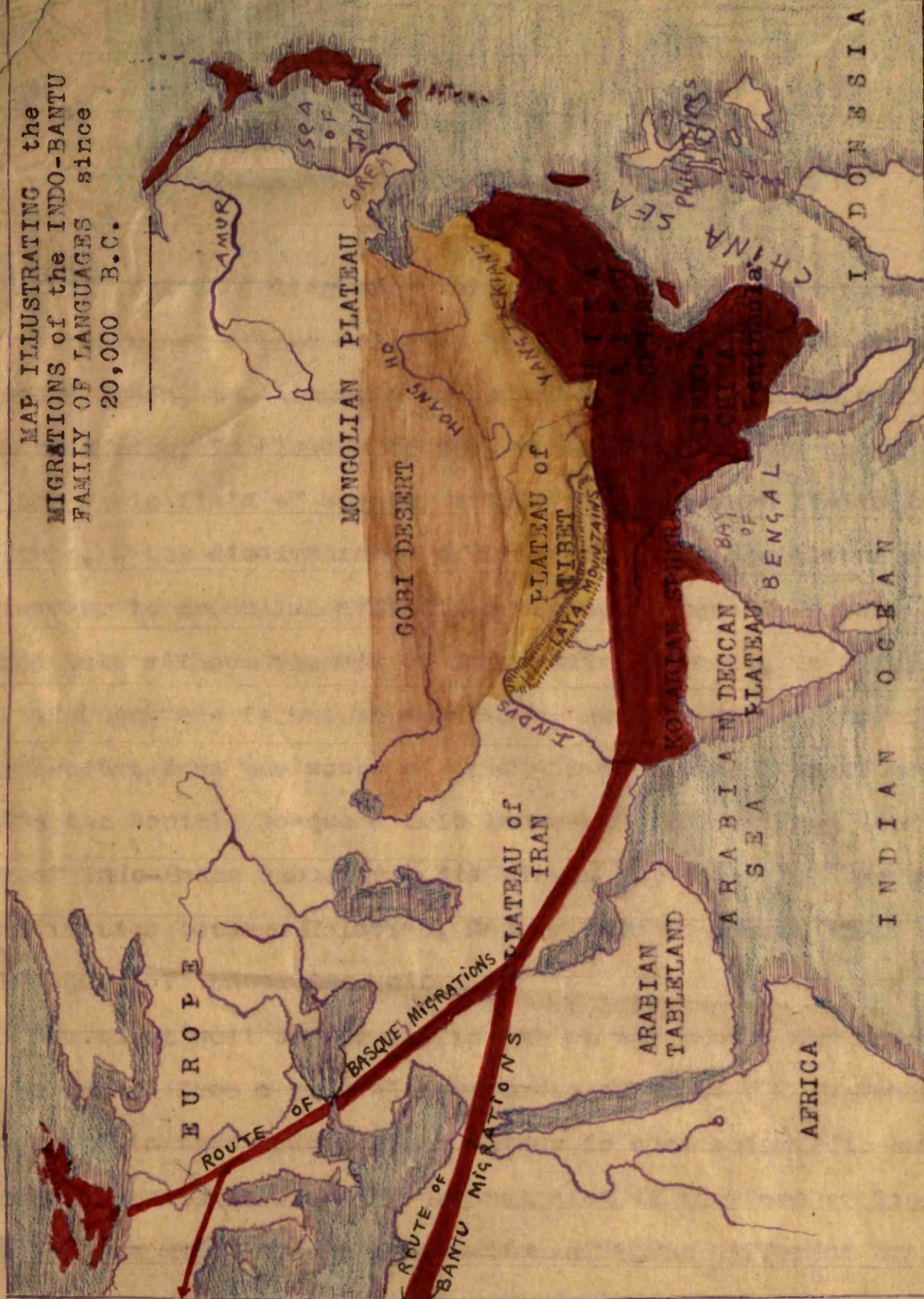
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MAP ILLUSTRATING the
MIGRATIONS of the INDO-BANTU
FAMILY OF LANGUAGES since
20,000 B.C.



THE INDO-BANTU FAMILY OF LANGUAGES.

The extensive bibliography which has gathered round the history & languages of the Kolarian peoples of Bengal, the Basques of France & Spain, the Ainus, & the Bantu tribes & nations of Central & Southern Africa, is already of such voluminous dimensions that to survey the whole field of enquiry within its narrowest limits is no simple task, & the disadvantages of limited vision are always obvious. My endeavour to establish affinities between Basque & Santali or Santali & Zulu without the aid of Comparative Grammar, to which the science of Phonetics is but an auxiliary, must be deemed inconclusive in its results; & as the scope of this Thesis on the laws of sound governing the Santal, Basque & Zulu languages is confined to the history of Indo-Bantu phonetics, its single purpose is to prove the close affinities between Kolarian, Basque & Bantu speech from the evidence of phonetics alone.

One might well be tempted to ask at the outset why three should be chosen from a possible aggregate of about 400 languages & dialects, & to this question the answer is that scientific methods & principles can be more easily demonstrated if they are applied to three languages which are representative of three different branches of speech, when a wider range of study could only bewilder the investigator & obscure the methods of research which should be clear & simple. Santali is the leading member of the Kolarian group, Basque is the last survivor of Kolarian speech in Europe, & Zulu is the most familiar representative of Bantu. This selection is by no means a haphazard one, the author having investigated a considerable ^{number} of languages & dialects, & from many years' experience found them to be the most suitable for the objects in view.

Owing to the exigencies of space, reference to many valuable works on Kolarian, Basque & Bantu languages is not possible, & the only text-books & authorities which are essential, include the following:

- (a) Santali. A Santali-English dictionary, by Rev. A. Campbell. (Poharia, 1899).
Grammar of the Santali language; by Rev. L. G. Skrefvud. (Benares, 1875).
- (b) Basque. Dictionnaire Basque-Français; by E. J. Van Eys (1878);
or, Diccionario vascongado español-Francés; by
R.M. de Azkua: (1906).
Grammaire comparée des dialectes basques; by
E. J. Van Eys. (1879).
- (c) Zulu. Zulu-English dictionary; by A.T. Bryant. (1906).
Grammar of the Zulu language; by L. Groot. (1869).

2. "Indo-Bantu" is a neologism which designates an isolated family of languages distinct from all others in Asia, Africa & Europe, not only in its vocabulary but also in its organic structure or word-building, & the arrangement of ideas or its grammar & concord. The number of living languages & dialects which may be classed as Indo-Bantu is not definitely known, nor can be ascertained before every member of Bantu speech is discovered. Herr Struck believed that Bantu possessed 162 distinct languages and 119 dialects. But since his time, the further exploration of the African continent has added so many new names to the list that his statistics have lost their value. In his latest volume on Bantu, Sir H. Johnston has increased the number to considerably over 400 Bantu & semi-Bantu languages; so that the actual total of Indo-Bantu languages is probably not below a minimum of 400.

3. All Indo-Bantu languages readily lend themselves to classification according as they are distributed into any of the four great divisions of Indo-Bantu speech: viz.,

- (1). The Munda or Kolarian languages of Assam, Bengal & the Central Provinces of India.
- (2). The Ainu dialects of Japan & eastern Asia.
- (3). The Basque dialects of France & Spain.
- (4). The Bantu languages of Central & Southern Africa.

These four groups are easily recognised since each of them has developed characteristics of its own which are the key to its individuality, but derived all of them from the parent-speech. Theoretically speaking, Santali, Basque & Zulu are not regarded as diverse tongues but as individual replicas of a single language. Their identity would be evident if they were now preserved in a state of perfection, & then it would be unnecessary to establish their relationship by scientific means. As they are

far removed from their pristine condition, so that their common ^{origin} cannot be proved from any superficial resemblances of speech, the only true criterion of relationship is that of a common ^{system} grammar, phonetic ^{system} & vocabulary.

3. In its exclusive sense, the term "Indo-Bantu" conceives the existence of cognate tongues which are not derived from one another & as it would be useless for anyone to argue that Santali is derived from Aino, or Zulu from Basque or Santali, the four groups of speech have all to be traced back by the philologist to a single mother-tongue--herein styled "INDO-BANTU"--which has been extinct for over 20,000 years.

If history & tradition have nothing to say of this venerable tongue, the only reason can be that literary history is a very recent invention. The reality of its existence cannot, therefore, be argued from the fragments of tradition nor supported by any etymological & anthropological theories of race-origins; but only by the indisputable evidence of Eolarian, Aino, Basque & Bantu grammar and phonetics.

4. As the outstanding characteristics of these four groups clearly indicate, the parent-speech was a highly agglutinative & polysynthetic type, if such may be so styled which has to distinguish gender (masculine, feminine, neuter animate & inanimate), number & case, & all the variety of ideas latent in monosyllabic roots, by means of prefixes, infixes & suffixes (all of which are inflected), besides pronominal particles or "classifiers" whose functions are to arrange words in special classes & indicate their meaning, gender & number. The inflexion of every part of speech is performed by the aid of stereotyped prefixes, suffixes & other particles; few of which in Santali, Basque or Zulu can now be used independently, or have such value apart from their functions. Every word is an inflected part of speech. Roots are meaningless though full of latent ideas, & can be turned into any part of speech by the addition of other roots & inflexional particles which define or modify its sense & purpose. Thus, to become a verb the root passes into the dative or locative with the meaning of "to" or "at"; as an adjective indicating quality or possession it is made a genitive; as an adverb it may appear in any case except the nominative; & as a noun in the nominative,

a pronoun must be added to signify the person or thing, before inflexional particles can be suffixed. In short, every vocable after analysis is found to be an inflected form, & the simple vowels, when they have a definite meaning, are discovered to be compound.

From this it follows that every Indo-Bantu language must possess the complete declensional system of the parent ~~language~~^{tongue}, to which every intelligible part of speech owes its being. Zulu is commonly regarded as an agglutinative tongue but not inflexional, because grammarians have never grasped the true character & significance of prefixes & suffixes, vocalic or consonantal, & the relationship of terminal vowels to the roots they qualify. For instance, KUL- in Zulu means nothing; in the dative KUL-A it means "to grow"; but in the genitive KUL-U (with -U in Auslaut), it is "great". The consonant P- must be inflected to make sense. We find it as a dative in P-A, to be (which forms verbs from adjectives), e.g., kali-a, to be sharp; the locative in PA (pa-i), at, on; the inessive case in P-I, in what place, where; the vocative in P-O, well then! (an interjection); & the nominative neuter inessive P-E, place, position, - five different inflexions of the root Pa, "being", which vary its signification without the help of any prefixes. The forms of verbs in -A are explained by the fact that all Indo-Bantu verb-infinitives are the dative or locative cases of nouns in -i, itself a compound of A, to be, & -i, place, in, at; those of adjectives (which are practically non-existent) are the genitive cases denoting some inherent quality possessed by the root. The absence of declension in Zulu, in Baka, accordingly, can be proved to be an erroneous idea, as the whole language is constructed from the very same declensions which are used in Basque & Kolarian speech. And as every word is an inflected form, the importance of scientific etymology cannot be underestimated. It becomes the virtual foundation on which the entire superstructure of Comparative Grammar is built, & must be well & truly laid to withstand the windiest criticism.

5. In determining the oriental affinities of Indo-Bantu speech, we must first settle the question of its original home: & the most usual step is to compare vocabularies & the etymological character-

of diverse peoples, so as to establish their affinities or at least their former geographical contiguity. By this means, two general conclusions regarding the Kolarian languages have been reached by scholars & men of science which may be briefly summarised thus:

(a). The original habitat of the Kolarian group was some region far to the east of Bengal. Chinese & Indo-Chinese philologists call it "Mongoloid", because its affinities are not Indian but Mongolian; & although Kolarian languages are not descended from any existing type of Mongolian speech, their Mongolian origin & affinities in a remote prehistoric era seem to have been fairly proved by much scholarly investigation.

(b). According to the theories of anthropologists & ethnologists, the aborigines of Bengal belong to the negro or negrito species of man, which formerly inhabited the whole sea-board of Southern China & Indo-China down to historic times; & is linked with the Ainu of Japan who are its last survivors in the Far East as the Basques are in the Far West. Its recognised sphere of influence before the Chinese & Indo-Chinese peoples swept down from the north, is said to have extended from the mouth of the Yangtschiang to the Malay Straits, including Formosa, Borneo & the Philippines. The whole argument of the ethnologist or anthropologist is that the Kolarian negroes are neither Chinese nor Indo-Chinese in origin, but a remnant of the prehistoric Mongolian negrito race whose ultimate Indonesian derivation has never been questioned.

By at least two different methods of tackling this problem, we are thus assured that no theory can be entertained which claims Bengal as the original home of the Santals, Basques & Zulus. The Asiatic habitat of the Indo-Bantu family of languages must, for this reason, have been situated in China south of the Yangtschiang, contiguous on the north to the Chinese, Indo-Chinese & Tibeto-Burman, & ~~Indo-~~Thmer families, & on the south to various Indonesian races of the Archipelago. Thus it happens that a great number of similarities in grammar & vocabulary can be traced without any trouble, between Indo-Bantu, Indonesian & Mongolian languages. But in every case, they are evidence of former geographical proximity only, & have no value as evidence of linguistic affinities.

So much has been written to prove the existing resemblances of speech that are common to the Kolarian, and Mongoloid branches that their non-relationship is sometimes overlooked. The Ainu, Kolarian, Basque & Bantu groups cannot be scientifically proved to be descended from, nor can be identified with any type of Mongolian or Indonesian speech: hence, the Indo-Bantu mother-tongue must have flourished east of Bengal in remote prehistoric ages when China & Indo-China were not then occupied by the ancestors of the present inhabitants. We have thus to look backwards for a period of nearly 20,000 years, so as to gain a glimpse of the days when Santals, Ainus, Basques & Zulus lived together on the littoral of the Chinay Sea: & this littoral, - from the mouth of the Yangtszekiang to the Gulf of Tonquin - we believe to be the former Asiatic homeland whence the four divisions of Indo-Bantu speech have originated.

According to Colonel Gerini who has made a special study of the ancient geography & ethnology of Lower Bengal & Indo-China, the Kolarian race should be identified with the early negro populations of Indo-China & the Chinese littoral. "In dealing with the past of these regions", says he (referring to Cochin-China, Cambodia, & Annam & Tonquin), "we must take this ethnical element into account, since it is, as with the Dravidian tribes in India, the fundamental negro element of most wild tribes of Southern Indo-China & the Malay Archipelago."* "The fact of celts of a shoulder-headed type, perfectly similar in shape, having been traced all the way from the district of Gautis Nagpur in Central India, throughout the sea-board of Burma & the Malay Peninsula, to the Great Lake of Camboja & the Upper Mekhong in the district of Luang Phoua Bang, is sufficient proof that the same race occupied the coast-line & lacustrine districts & that this race is one of the pygmy negritos above spoken. The Chinese were acquainted - as evidenced by their old records - with negrito tribes from several parts of Indo-China... Ptolemy places his "Iontoponagad Aithiopes" around the Frontier & the Gulf of the Sinai; namely, about the Leimon Peninsula & the Formosan Channel. At that period these negrito populations must have been still in occupation,

* (Vide Gerini's "RESEARCHES ON PTOLEMY'S GEOGRAPHY OF EASTERN INDIA")

not only of the sea-board of Southern China & the neighbouring islands, but also of many points of the littoral of Tonkin & Cochin-China, their last descendants being on the one end the hill tribes of Formosa, & on the other the Tiao or Tiao pygmies & other tribes of the Cochin-China-Cambojan frontier, as yet but little known".

(Op. cit., pp. 256-257). The conclusions he arrives at are these:

- (a). The prehistoric aborigines between the Sanchal Provinces, Indo-China & the Yangtsekiang were of the negrito type like the Ikatayongoi Aethiopes.
- (b). They were a maritime race, for the most part settled along the coasts of China & Indo-China.

It is an historical fact that this part of China was occupied by a race of Indonesian origin until the Christian era; & in Formosa & the mainland of Fuhkien opposite the island, the aborigines were strong enough to maintain their independence against the encroachments of Chinese civilisation till recently. Professor Terrien de Lacouperie in his brochure on "Formosan notes on MSS., races & languages", has endeavoured to show that "the former nucleus of the population" the great extension of the negritos from Japan to Formosa & the mainland of China establishes the former influence of the negrito race". After much research, he concludes that "the former nucleus of the native population of China was Indonesian in character at the beginning & gradually diverged from their former standard under the combined influences of their new surroundings, linguistical & others".

Again, Sir George Grierson in his book on the "Languages of India" (1903) says that "Tradition & Comparative Philology agree in pointing to north-western China, between the upper courses of the Yangtsekiang & the Hoangho as the original home of the Indo-Chinese race...Further India & Assam have been populated by successive waves of Indo-Chinese invaders, each advancing in turn down the courses of one or other more of the principal streams, the Brahmaputra, the Chindwin, the Irawaddy, the Salwin, the Mohni, & the Mekong, & driving its predecessors nearer to the sea-coast or into the mountain-fastnesses which overlook the valleys.

Philology, moreover, teaches us that the earliest inhabitants must have found another race already settled, concerning whom little

definite is known. It is probable that its members were of the same stock as the progenitors of the great Munda race". ("Languages of India," p. 6.)

6. We are not advancing, therefore, any new or extravagant theory in claiming the territory between Lower Bengal & the mouth of the Yangtschiang as the Asiatic homeland of the Indo-Bantu languages (Ainu, Polarian, Basque & Bantu) whose ultimate Indonesian origin can be inferred from that of the negro or negrito races which speak them. That the remote ancestors of the Zulus & Basques were familiar with the China Sea & so established contact with various Indonesian tribes is a fact which receives every support from these western tongues. An example, to be discussed later, is the Zulu word *ulu-Vervane*, butterfly, *notu*, Basque *Pimprina*; Santali *Piprian*; — all derived from an Indo-Bantu verb **pep-aí*, to flap or flutter; whence **pep-l-an-*, "the thing that flutters". Beyond this, phonetics will not permit us to go further: but it is curious to find that this word runs through most Papuan & Melanesian dialects of New Guinea, some using a prefix which in others is suffixed. Compare in the Muan (Papuan) dialect *Kori-baba*, butterfly, & *Tubiri* (Melanesian) *kare-bibim*. There is little doubt that the Indo-Bantu word originally denoted some species of New Guinea or Indonesian butterfly, as the dialects of Borneo & New Guinea owe nothing to Santali, Basque or Zulu.

Before passing entirely from this subject, it may be of interest also to observe that the Bantu word for "canoe" (*iwato*, *wato*, *ato*, *atu*, — for which Meinhof postulates the type **yato*), is cognate to Santali *kos*, boat (hence *dhūa-kos*, "smoke-boat", steamer), which occurs in Mōñ-Khmer *katu*, *katau*, a junk or fisherman's skiff. This appears in the Ptolemaic place-name *Kata-beda*, "boat-island", — now Gaeduba Island near Sandaway in the Gulf of Martaban. In this neighbourhood lived the Polarian tribe of the Savares (Ptolemy's *Sabari*) up till quite recent times. The word *bedā* or *vedā* (Savara *voda*) is apparently a Sanskrit or Pali gloss on the older name *Kat-is* (a derivative of the Santal noun *kat*, timber): & it is curious to find that Low Latin has preserved the Indo-Bantu name for the canoe or junk in the word "cotta", which

is explained as "navis Indica".

Formerly, the Basques were the greatest whalers in Europe & America. That their remote ancestors of the Chinese littoral were equally skilled in whale-hunting is suggested by the existence of Indo-Bantu terms for the whale and the cuttlefish on which it feeds. Thus, Zulu um-komo, um-komu & Swahili ngumi, nye-ngumi, "whale", are derived from the onomatopoeitic root *ghum-, which seems to have imitated the blowing noise made by the Pacific whales over 80,000 years ago. The history of the word is lost in Bantu but cognate forms in Ainu & Santali make it clear. In Ainu, Hum (for *ghum) signifies a blowing sound; whence um-be, whale, "the blower". The same root occurs in Santali hum-tak', to make a noise in water (said only of fish), & Hum, the shout or "blowing-up" which a farmer gives his oxen when they are lazy at the plough.

Again, the original name for the Pacific Ocean still survives in Zulu uli-wandale, sea, = Ainu etui, sea, the Pacific, Basque ihaso, ihaso, sea, - the root-meaning being found in Santali etu, to flow, - all from the Indo-Bantu *agu-is or *agi-is, the velar guttural showing dentalization by i in Ainu, Santali & Zulu.

It seems likely that these ancient peoples could have taught old Jonah a lot more about the habits of the sperm-whale than what he ever gathered from inside knowledge. When the early forefathers of the race went a-fishing in troubled waters, they discovered that the whales they hunted, had a strange liking for the voracious cuttlefish, about which they had many a stirring yarn to tell at home. The least offensive name they called it was the "ink-squirter", which aptly described its peculiar habit of emitting an inkly fluid when attacked by man or whale. In Swahili, nkomo means cuttlefish, a word which seems to have been confused with that for whale—if it be the same as Zulu nkomo; or else it is a slightly altered form of a somewhat similar root -kobo, khomo, 'cuttlefish'; in its primary sense & 'ink' in its secondary. Among most inland tribes, the original meaning is out of vogue but the other reappears as kobo, 'ink', in the Lu-Bangi, Ki-Lolo & Li-Ngale dialects of the Congo. The root is explained by its Santal cognate gab-so, to stain or dye; whence has come Basque chibi, cuttlefish. And from

Basque has been borrowed gionsech, cuttlefish, in Gaelic, from a Gaelic prototype *gebbi-, cuttlefish (a word of unknown derivation according to MacBain's Etymological Dictionary of the Gaelic Language). It is thus possible by the aid of phonetics to trace the original Indo-Bantu words for the whale, cuttlefish, & the sepia or ink used by the inhabitants of Bengal & Indo-China from the Santal Provinces to the Basque Provinces & Scotland, as well as to the Congo, Nyassaland & Zululand.

7. There can be little doubt that the language of this maritime race was highly pronominalized, much more so than any surviving Indo-Bantu dialect but in examples quoted, only the bare roots are compared together. This simpler method is apt to overlook the classifiers & particles which define the meaning, gender, number & case of the roots themselves, but the history of these really calls for special treatment by reason of their importance. A few examples may here be given to show that the prefix or classifier is a very archaic part of speech & independent of the root to which it is attached. If to the Santal word lei, le, 'paste', we prefix the classifier *hóm*, black, a new idea is expressed, *hólhet?* viz., *^*soot (= *num-li*, soot, in the Echin language of Burma). *Hólhet* comes from an Indo-Bantu type **hóm-le-id*, "black-paste-id," the inference being that the original word was not *-lei-*, which signified paste of any colour & quality, but had this prefix for "black" along with a suffix of the neuter inanimate gender when the meaning was 'soot'. Its archaic use is also proved from the Zulu cognate *um-le*, soot, from an Old Zulu type **hóm-le-i*. The root-idea of this old classifier appears in Santali *huhum*, twilight (beside *kuh-as*, mist, haze, without the prefix); *hut*, & its weakened form *hinda*, night, to become night, dark, darkness (Idb. **hóm-tai*). Thus the chief difference between the Santal words *huhum*, *kuhas* depends on the presence of the prefix; & their affinity to Zulu *umu-Si*, smoke, is duly evident after we have learned how the Indo-Bantu root **-geugh-* produces **kuh-* in Santali but **-yiki* (whence *-Si*, smoke) in Zulu. According to Meinhof, the Bantu type should be **-yokí*, which is fairly close. While the bare roots are easy to trace in this fashion, we cannot overlook the fact that in both cases the original words employed

prefixes whose function was to limit the meaning of roots, e.g., Idb. *ng-le-id, root: *ng-qeuh-1, snake.

8. Similarly, the Idb. classifier *men, tree, is prefixed to the names of trees or anything from a needle to an anchor which is made from any part of a tree. In Santali, the singular is mun-, with plural man; in Zulu, the prefix is umu-, with plural imi-,—both languages forming this arecic plural by vowel-Ablaut & not by pronouns. Compare the Santal words: mun-fu, jungle, a copse (whence the name of the Mundu Baske, a sub-tribe of the Baske or Santal Basques); mun-ret, a log; mon-dhant, a chura-stick (cf. Basq. mon-don); mun-dhe, mun-dhak', mun-dhet', a stick, log, tree-stump; mun-dhan, tree-pole, the ridge of a roof; and with plural in man-bir, a celebrated forest known only to tradition, the suffix bir, forest, being the gloss on the earlier word man, forest, trees. Minus the classifier, we obtain the bare root in dai, pole, stick, & its diminutive dhanda, stubble, short sticks; but that this prefix is an integral part of this class of words can easily be shown from Zulu which regularly employs it before the names of trees & objects made from branches, leaves & roots. Hence, Zulu umu-Ti, tree, stick, & its Santal cognate mun-dhe, mun-dhan, both coming from the same Idb. type *mun-dhan-, the accent being originally on the root as it is in Zulu, & not on the prefix as in Santali.

9. Of a different origin is the honorific prefix man-, mun-, which occurs in such words as Santali man-wa, a human being, man-si, each person; man-so, gan-so, to honour, respect; man-dar, man-jai, a chief, headman; man-jai-an, a Santal female; man-oi man-wa, human beings, "respected adults"; mun, a semi-divine being. The verb is man, manao, to honour, respect; with intensive form an-man, to esteem, appraise, take careful notice of, to name with respect. But as shown by the sound-shifting between g & m in the bi-forms manao, ganao, to honour, the initial consonant was not m but the labio-dental nasal m-, a compound sound made up of velar qu and the nasal n which is assimilated by the heavy u. Hence, the Idb. prefix *mun- is an attenuated form, derived from a verb *qein-n-ai, to honour, respect, obey; & its chief function is to classify personal nouns.

An archaic example of its use may be taken from the name Mun-da (Ido. *Mun-dha, "the men"), which is, perhaps, the more correct designation of the Kolarian aborigines, but now confined to the Mundas of Ghat Nagpur whose dialect is called Munda-ri, "man-language". That of the Sanths is known as Santa-li, the same suffix appearing in the Basque words erda-ra, a foreign language, hitze-ra, speech, language (from hitz, word), & Euska-ra, the Basque language. The Zulu cognate to Munda is umu-tu, man, the personal prefix of the first class having lost an initial consonant which reappears as g or γ in the more archaic Bantu dialects. Sir H. Johnston holds that its earlier type was *gumu, but the Ido. root *qeim- requires the velar fricative γ in Bantu in accordance with phonetic law, — terminal -n of the old genitive being preserved in Auslaut (as in the adjective kulu-n, great, & its derivatives in-Tulu-kulu, kulu-gwene). The older form of this honorific prefix in Zulu was, therefore, *γumu, *γm-n, which came from a root *γm, to honour, respect, of which a stronger form is met with in -gamu, name, Gwede, a title of honour used in addressing the Zulu king. The co-existence of strong & weak forms of the same root explains Santali ganno, manno, & Zulu gamu, gwede, beside the Santal honorific prefix mun- & Zulu umu-.

10. Illustrations of this kind have now been given to indicate from the outset that Basque, Santali & Zulu belong to a family of agglutinative, highly pronominalised & inflectional languages which are built up from monosyllabic roots to which are added all manner of prefixes, infixes & suffixes. Furthermore, by pronominalized we do not suggest that the number of prefixes is limited to sixteen as in modern Zulu, & 21 or less in other Bantu dialects. The fewer prefixes to be learned in Bantu is a boon to the beginner but their real number, even in Zulu, is still very considerable however disguised they be. Examples like umu-le, umu-ti, umu-tu have been given to illustrate how a single prefix now does duty for others with which it has no connection, In fact, the natives, after the original meanings of prefixes, infixes & suffixes were forgotten, seem to have reduced the whole to an attenuated system which has simplified Bantu grammar & made them easier to speak & acquire.

11. A few remarks may be said in conclusion with regard to the probable age of Santali, Basque & Zulu which we are about to examine in detail. We believe that they are not less than 20,000 years old, & that Basque & Zulu have migrated together through Lower Bengal from the Chinese littoral south of the Yangtschiang. Bantu languages are not derived from any Kolarian type of speech, as the evidence of grammar & vocabulary proves that the Kolarian & Bantu groups entered Bengal from the east in a fully developed condition, & were distinct in type although of the same origin. But these dialectal differences begin to vanish the further back they are traced in Indo-Bantu speech.

A rough calculation may thus be made from a few facts of history which oriental scholars have arrived at, & are not seriously disputed. The oldest written documents of Western Asia can be traced back about 10,000 years. Venerable as is their antiquity, they are too recent to mention the Basques & Bantu who traversed all that region on their way to Europe & Africa. The invention of writing is admitted to be much earlier in time, but of its place of origin nothing is known. Yet it seems that learned Basques & Zulus could read & write before they left Bengal or Indo-China, because the Id. verb *prek-, to read, survives in Santali park-so, & its Basque cognate irakurri, to read. A clever or accomplished Santal is called Har-ap' after he has learned his "letters": hence the phrase: Olok' narach' roye harap'akane, "he is efficient in reading & writing". The idea of cleverness comes from har-or, a letter of the alphabet, & no man is accounted clever or educated who cannot read or write. The root-verb is har, to draw with the hand (Id. *gher, *ghr). Cognate with these words are Basque gero-tu, to hold or restrain with the hand; & Zulu kali-ia, to turn back or restrain people or cattle (originally by beckoning or motioning to them with the hand). The secondary sense appears in the verb kali-ra, to take in hand in a masterly manner, to be intellectually sharp, to be smart; in the adjective kali, clever, sharp, smart; & in the noun ubu-kali, professional efficiency or smartness (as of a doctor),—Zulu ubu-kali & Santali har-ap' being identical except for the position of the classifier.

Another factor in calculating the age of Zulu is the antiquity of Egyptian civilisation in the Nile valley, - a subject which we have no wish to consider, as Egyptian influence on Basque & Zulu is nil. According to De Morgan, Amelineau, Flinders Petrie & other eminent Egyptologists, the rule of pre-dynastic kings whose tombs at Abydos reveal an advanced state of culture, is assigned to the period between 5000-6000 B.C., & to this estimate must be added another millenium at least to allow for its growth & expansion throughout the Nile Valley. The inference ~~has been~~ to be derived from their conclusions is that the Zulus must ~~have~~ have crossed North Egypt long before 7000 B.C., because Zulu never came in touch with Egyptian.

Assyriologists aver that great city-states flourished in the Mesopotamian region during the period 6000-5000 B.C., & they argue that the antiquity of Babylonian civilisation goes back to the 8th or even the 9th millenium B.C. If this be fact, it means that the Basques & Zulus must have journeyed through Mesopotamia & the Holy Land before 10,000 B.C.,—evidently a considerable time before the Jews went up to Jerusalem to discuss with Moam the laws of navigation or before Moses discovered the latitude of the land of Mod. As nobody is ever likely to claim the Basques, Zulus & other Bantu negroes among the lost tribes of Israel, the question of Semitic influence on Basque & Bantu speech cannot be said to exist. It is certain that the ~~ancient~~ ancient Basques & Zulus never met with Semitic races in western Asia, for otherwise, their respective languages would now show evidence of former contact.

Finally, if we allow the moderate estimate of 6000 Years to elapse from the arrival of Basques & Zulus in Western Asia & the date of their settlements on the Chinese littoral—after they had wandered over the length of Indo-China & India, we are led to conclude that the Zulu language has taken a period of not less than 10,000 years to traverse the intervening continental areas between Zululand & the ^{China Sea} ~~Y~~ ^{past} ~~history~~; & at no time in its ^{past} history came in touch with Aryan, Semitic or Egyptian races which have been so long known to modern literature.

2. As a leading dialect of the Indo-Bantu Family of Southern China & Indo-China, it was descended from a highly developed type

of speech whose great wealth of vocabulary was owing entirely
 of word-formations
 to the illimitable extent which agglutination provided. Its
 syntax is logical but complicated, and its inflectional system,
 which arranged nouns in not less than eight different declensions,
 each of them with over ten cases, four genders & three numbers,
 must have taken a very long time to evolve before ever this
 family of languages became Asiatic at all. Without those declen-
 sions, Bantu languages could have no Concord, for they constitute
 the basis of all Indo-Bantu Comparative Grammar. But apart from
 grammatical structure, not the least extraordinary of phenomena
 is the relatively precise articulation of its sounds; & this we
 consider to be characteristic of cultured speech & a civilised
 people. Had the parent Indo-Bantu tongue been some unstable
 species of barbaric growth, whose principal sounds were imperfect
 or constantly deviating from acoustic or other physiological
 defects,—such as seem to be everywhere obvious in Polynesian &
 Melanesian dialects, the existence of regular laws of sound-
 change could not be suspected or proved. When they are found to
 be so mechanical in their operation that the philologist is rather
 reduced almost to an automaton, the phonetic stability of Indo-
 Bantu speech becomes the more apparent. The limitations of our
 historical knowledge tempt one to believe that the Indo-Bantu
 civilisation of Indo-China & Southern China was formerly one
 of the wonders of the world in the 80th millennium B.C. Its
 culture & civilisation have survived but its distinctive type
 of speech is retained in its purity among the savage portions
 which have been loth to yield to alien influence.

II.

THE KOLARIAN LANGUAGES OF BENGAL.

I. The aborigines who are designated Mundā or Kolarian are distributed over the whole western frontier of Lower Bengal for about 400 miles from the Ganges to the Baitarani river, & from the hills of Bagalpur to within a few miles of the sea, - a territory about 400 miles long by 100 broad. The population is about four millions but this total would be greatly exceeded if we included many millions of others who have adopted neighbouring dialects. They chiefly inhabit the Chota Nagpur plateau with the contiguous districts of Madras. In the Mandao Hills (Central Provinces) are found the Kuruk or Korkus whose dialect has preserved several archaic features which Santāl & its neighbours have lost. The nomadic instinct runs strong in the whole race. They are not slow to migrate when it is to their advantage—to work in the coal-mines of Bengal, the tea-gardens of Assam, or to provide the British Armies with Active Labour Corps in France, Palestine & Mesopotamia. And it was, indeed, a strange coincidence in the world's history that, after the lapse of over 20,000 years, the Santāls, Zulus and Basques should meet again on the soil of France, & "do their bit" behind the French & British lines—for the successful prosecution of the "war to end war" & the elevation of the masses by the swiftest mode of transit known to mechanical science.

According to the Indian Census of 1901 (§447), the ^{habitat} ~~present~~ of the Kolarian group is stated thus: "The present stronghold of the Mundā languages (the people are spread much wider) is the north-east of the central plateau of India. The hills of the Sonnal Parannas, Chota Nagpur, Orissa, Chhattisgarh, & North-east Madras are full of tribes speaking various forms of the Mundā tongue, mixed

here & there with advanced colonies of people whose speech is Dravidian proper. There are also many in the plain-districts at the foot of the mountains, so that in north-eastern India they cover a large tract of ~~mountain~~ country. Crossing the Central Provinces, the mountains of which are mainly occupied by Dravidian tribes, we find the Khorats, also speaking a Munda language, at the north-west end of the plateau where Berar & the Central Provinces meet... Munda languages are also widely spoken in north-eastern Bengal & Assam... Fully eleven-twelfths of the Mundas of Eastern Bengal & Chota Nagpur fall under one or other of the two great nationalities of Santals & Fols. The former occupy mainly the north & east, & the latter the south."

2. In the Census of 1911, the Munda-speaking population of Bengal & the Central Provinces was returned at nearly four millions, the strength of the several dialects being represented by the Linguistic Survey of India as follows :

Santali	...	2,158,015
Mundari	...	589,580
Bhumij	...	152,471
Birhor	...	1,095
Kode	...	24,103
Ho	...	430,108
Turi	...	10,047
Asuri	...	4,246
Agaria	...	1,471
Birha	...	23,000 (Census of 1891)
Korwa	...	26,527
KHARWAR	...	3,380,661
Kurku	...	136,909
Kharis	...	126,583
Juang	...	12,513
Savara	...	166,260 (Census of 1891)
Gadaba	...	43,477

KOLARIAN ... 3,846,923

So far as statistics go, the aborigines seem well able to hold their own, despite the great pressure on their frontiers by all the surrounding races. A comparison of the Census figures for 1891 with those of 1911 proves that their number has increased during the interval by almost three quarters of a million; & this vitality of Kolarian speech is likely to continue indefinitely. Dravidian speakers are returned in the Census at 63,718,961; & as their languages were not allowed to migrate westwards out of India into Europe & Africa, owing to the former occupation of all Central India by Kolarian tribes & nations which controlled India's gateways to the west, the political power & influence of Kolarian

civilisation must have been far higher in the prehistoric past than that which struggles for existence in the jungles of Bengal. Nothing survives of this ancient dominion in Central India except whose speech the Kuriks & Mursi ~~AAA~~ represents the last links of a great chain of dialects once connecting Indo-China with the remote Basque & Bantu languages of the far west. What influence such peoples ~~are~~ may have had on the development of Dravidian civilisation we do not know, although Dravidian linguists say that it was considerable. Even the ethnical basis of Central & Southern India they make bold to say, must have been originally negroid like the Kolarian. That such influence was, however, certainly not one-sided can be proved from ancient Dravidian loan-words which have passed into ~~are~~ Bantu languages but unknown to the Kolarian & Basque groups. The most striking as it is the most obvious is the general Bantu name for "iron" (kiona, chuma, shuma, Ki-kama, chiama, ziama, dzama, etc.) which is not of Indo-Bantu origin, but the Dravidian word in common use throughout Central India among such primitive tribes as the Todas (kabbun), Badagas (kabbuna), Kotas, Kurumbas, Irulas, Gonds, & others more southern like the Tulus (karba, iron; kambi, a flat iron bar), Kanarese (kabbān), Tamil (karuṣan, iruṣu), etc. The Bantu word is mērhēt', which is cognate to Basque burdin, burni, "iron", & why the Bantu should give up using a native term in favour of this Dravidian word is hard to explain. At any rate, as the parent Indo-Bantu speech had its own names for the metals, to imagine the Bengal or Central Indian ancestors of the Basques & Xulus as living in the Stone Age of culture is out of the question.

3. Of Mundā languages, Kol is a leading member in Central & South Chota Nagpur, & in the neighbouring districts of the Orissa Tributary States & of Gangeticum. Its chief dialects are :

Mundari—spoken to the north in Ranchi & Palamu ;
Ho or Hor (the "mān" language)—in Singhbhum & the tributary states to the south.

Bhumij flourishes in the same country as Kol, its sub-dialects being Tururia, Bir-aor ("forest-man" language; Ki-Bire, as the Bantu would call it); & Turia which is spoken in Chota Nagpur & Sambalpur.

Among minor dialects of the eastern Mundas may be noted Kore or Koda which is spoken in Manbhum, Baramba, the Orissa

Tributary States, Sambalpur & the neighbouring Feudatory States. Naia is the dialect of a priestly caste whose chief function is to appease the spirits of aborigines, whom, it seems, the Polarian race had deprived of their lives & possessions. The most interesting of these tribes are the Asurs in the extreme west of the Lohardaga district. According to local tradition, they were formerly a pastoral tribe with great herds of cattle. They inhabited the Daulagiri & Mainagiri Hills until the Uraons drove them into the jungles. Since that time they adopted the profession of cattle-lifting, iron-smelters & fire-eaters, & their reputation has gone down among their brethren. A common saying of theirs runs thus: - Béro bhái Asur, terá bhái Lodhá; "the Asurs are twelve brothers but the Uraons are thirteen", because the latter proved the stronger & more numerous. Like the Savares, they have found a place in ancient Indian literature. Says one writer on this point: "The Bhagavat Purāṇa (1,3,24) refers to the people of Eikate (Bihar), who were in those days mostly Kols, as Asurs; & these Asurs of the Lohardaga (who are also Kols) state that they have borne this name from ancient times. We, therefore, seem to have connecting links for tracing the present day Asurs from the Himalaya mountains to the hills of Chota Nagpur". (Journal of the Bengal Asiatic Society. Vol.VII, p.8).

The Korwas, Kharias & Juangs are the principal tribes of western Bengal. The Korwas inhabit the west of Chota Nagpur, especially the states of Sirguja, Jaspur, Palamu, & the district of Mirzapur south of the Son. They are the only Mundá-speaking tribe in the United Provinces, & their language Korwa-ri, boasts of one dialect - Singli or Bhangā.

The Kharias are mostly found in the Ranchi district but have wandered as far east as Birbhum, westwards over the major part of Chota Nagpur, & southwards into Sambalpur & the adjoining Tributary States of Ganjam & Orissa. There are four clans - Juang or Patua, Gadaba, Savara & Kurku.

The Juangs of the States of Purnia & Dinakhan in Orissa are the primitive leaf-wearers who scandalise the Santals. Their speech closely resembles Kharis but has borrowed much from

Uriva. The most southerly forms of Kolarian speech are Savara & Godebs in north-east Madras. The most westerly is Kurku with its two dialects—Huasi & Nihali. Kurku or Korku ~~kurku~~ ("msh") is spoken in the Betul district of the Central Provinces & in the neighbouring portion of Berar. Nihali is practically extinct but Huasi still lingers in Gairindwara, on the Mandao Hills, & in the forests which converge on the rivers Tapti & Nerbudda.

4. A few peculiarities of Korku are worthy of notice. Its alphabet admits the sibilants ~~apsh~~ sh, z, when Santali has only s and j; compare Kurku shin, a hen; shingul, fire; shenē, to go; shukeri, hog; hazar, 1000; chīz, thing; beside their cognates in Santali: sin, singel, sen, sukri, hazar, chij.

It employs affricates unknown to Santali but very common in Basque, Bantu & Indo-Chinese. For instance, ts appears in Santali either as s or sh. Compare Kurku tsuri, knife; tsing, tree; beside Santali churi & sing.

The rounding or lip-modification of preceding consonants is found in Kurku & Bantu, yet absent from Santali which shows a strange dislike for combinations like kw, tw, pw, etc. Compare Kurku kwali, rabbit, with Santali kulai, a hare (=Basq. -gare, hare, in the compound uda-gare, otter, "water-hare"); & kwage, to beat (Basq. zeha-tu) with Santali karai. This lip-rounding of initial sounds is a feature alien to the Bengal dialects, & its presence in the Kolarian dialects of Central India almost suggests where Bantu ~~gwas~~ may first have acquired this trick of speech.

In this dialect, also, occur those dentilabials which are foreign to Basque & the Bengal dialects but generally used in Bantu. Compare Kurku faida, advantage; māfoki, to forgive; ^{(ifil, star:} āva, herbs; beside Santali pameda; wapa, map; ipil.

Another feature which Kurku & Bantu alone share together is their dislike for words beginning with a vowel. Many Santal words of this kind appear, therefore, in Kurku with an initial breathed h or w. Compare Kurku hop, hair; hin-gen, here, either; hūju, to play; wete, ground (Huasi wote); and Santali up'; in-de; enech'; ot.

Per contre, Santali h (from Id. gh) regularly becomes k in Kurku & Zulu, although their history is different; for the Zulu

sound is a true explosive, whereas that of Kurukh is a variety of *gh* through the intermediate stage of *kh*. An example of this interchange between Kurukh & Santali, compare Kurukh *kaku*, fish; *kakhar*, mother-in-law; *kole*, yesterday; *kore*, road; with Santali *kaku*; *kakhar*; *kole*; *kore*.

Another of its primitive features is its mode of forming perfect the past tense of verbs by adding the suffix *-ren*, *-len*, "to have" (Santali *-le*, *-i-le*), which is also a genitive ending in Basque & Santali & used in tense-formations (e.g., the Basque future). It seems curious that Santali has changed its suffix of the perfect tense, but the antiquity of the Kurukh tense-particle *-ren*, *-len* may be inferred from the fact that numerous ~~monotonous~~ dialects of Bengal & Assam which have either not adopted the analytic Aryan way of forming the past tense, or else dropped the Aryan or Dravidian in favour of the Kolarian synthetic style, make use of this old Kolarian tense-suffix. Thus, we find Hindi *us-ne mara*, he struck; beside Uriya *mārilē*, Bengali *mārilēk*. This *l* is also characteristic of the Past Participle; whence Uriya & Khonds *māri-lē*, Bihari *mar-al*, Bengali, Assamese *mār-il*, Gujarati *marē-lo*, struck. The past tense of Bihari is formed by adding *-le* to the verb-stem, e.g., *ra-le-ō*, I obtained; *de-lē-i*, I gave. Assam *Naga* (Assam) has *-le*, as in *xō-lē*, said; while Deoria Chutia (Upper Assam) has *-ri*, as in *chi-ri*, died; *lari-ri*, I have given; *lari-a-ri*, I have not given. The Chinese past tense in *-leou*, which has the sense of completion of an act, appears to be related to these Indo-Chinese forms. In Sereva, the past tense ends in *-le*, as in *kiel-le*, he died; the suffix being evidently the same as *-len* in Kurukh which was its Indo-Serbo form. Sereva also uses the suffix *-ete* in the third person instead of *-le*, but this may have arisen from dissimilation. Similarly, in Yao the past tense ends in *-ile*, but often the suffix appears as *-ite* by dissimilation.

6. Of all the Mundu vernaculars of Bengal, Assam & the Central Provinces Santali claims to be chief. Its geographical area extends to something like 5470 square miles. "The headquarters of Santali are the Santal Parganas north-east of ^{the} Chota Nagpur plateau, at the eastern end of that great range of hills which extends right across India as far as Mount Abu, but the language covers a much wider

extent of country. To the north there are numbers of its speakers in Bhagalpur & Monghyr, & to the east we find it in the districts of Birbhum & Murshidabad. It extends much further south through Manbhum, Bankura, Burdwan, Midnapur, & eastern Singbhum, right into the Orissa Tributary States". (Indian Census Report of 1901; pp. 181-3). The northern dialect in Bhagalpur, Monghyr, Birbhum, Bankura, Hazaribagh, Manbhum & the Santal Parganas is the most cultivated, & being recognised as a general literary medium, is now regarded as the standard form of speech.

Next in importance there follow Mundari, Ho, Bhumij, & Kurukh; but the uniformity of these is so regular & undeviating, & they are spoken with little more than localisms & dialectal peculiarities that a practical knowledge of Santali will be found the most useful. Santali is superior to every other in grammatical structure, its greater flexibility & wealth of diction, & seems either to have raised itself to a high plane of development like Sanskrit, the only Indian tongue with which it can be fitly compared, or else must be the offspring of some greater civilisation than that which ekes out a bare existence among the jungles. The pronunciation of the language is dignified & polished like Sanskrit, its alphabet being virtually identical with that of the oldest literary Aryan tongue. That this alphabet was richer by far than the Sanskrit is easily proved, for the Basque & Bantu groups have their own tale to tell. And passing strange it is to discover that the comparative perfection of their speech, with all its marvellously intricate conjugations & inflexions, its wide range of vocabulary & idiom, should present so marked a contrast to the humble conditions of their social economy. Their position, in fact, affords a strong analogy to that of Ireland, an ancient culture & civilisation yielding to brute force but still preserving the intellectual heritage of their forefathers in the wilderness.

6. Amidst India's perplexing variety of races & racial characteristics, the pure negro type of Santal stands out from all others. The Aryan, Dravidian, Theto-Burman, Chinese, or Semitic races have each a distinctive type of their own, although they may vary according as they are mixed. But the negro type is easily

recognised from these; hence, ethnologists have always sought to trace the affinities of the Folerian aborigines with the negro & negrito races of Indonesia & the Indian Archipelago.

In his book on "Sonthalis and the Sonthals", Mr. Man gives a lucid account which is well worth perusal. The most negro-looking people in all Asia, as observes that the Santals are hardy & vigorous, of fine physique, & with a liking for manly sport which can best be indulged in the hunter's Paradise—the hills & forests of Bengal. "The ethnological characteristics of the Santals", says he, "distinguish them from all other races in India, nomadic & civilised. The men are of middling stature & remarkably well made, with darker skins than the Bengalis. They have strong limbs, somewhat thick lips, & in many instances, their cast of countenance almost approaches to the negro type. They wear the hair, which is long & coarse, tied in a knot on the top of the head, the ends hanging down from the centre like a dragon's tail which gives them a wild & savage appearance." ‡

7. Some of these characteristics are more prominent in various clans & septs, & have given rise to nicknames like Bedea, "broad-faced" or brachycephalic; Baigorae, "black & broad-faced"; Chepre, "flat-nosed". Apparently, the flat nose of the negro was always evident, for the epithet of "flat-nosed" is the same in the four groups of Indo-Bantu speech, viz.,

Ido. *kep-ta-: Sant. chep-re (Sanskrit chipita): Basque chab-al, ma-al; Zulu offi-za (cate, to be flat); Ainu kap-ké, flat (etu kapke, flat-nosed); kap-tek, flat, to flatten.

8. The reference to the Santal coiffure is interesting because their style of head-dress is very ancient. To dress or tie up the hair in Santali is su-t': in Zulu zo-nya, small hollow reeds being used for the purpose. As the original Indo-Bantu race wore the pigtail, other unsophisticated peoples believed that these negroes had real tails; & to this day there are those who maintain that the negritos of Formosa & Indo-China were very like the Satyrs of tradition. Scholars have, however, exploded this popular delusion, & the tails of African, Asiatic & Indo-Chinese tribes are now well-known to be ornamental.

‡ (Vide Man's Sonthalis and the Sonthals; pp. 13 et seq.)

Murru, Hambrom, Haradi, Soren, Tulu, Baske, Basra, Chôré, Fauria, & the twelfth is one of the lost tribes.

10. From the ancestors of the Baske clan are descended the Basques of Europe, the name meaning "settler, squatter", as indicated by the derivation of the Santali word Baske from the verb bas (Idb. *bes), to settle, dwell, inhabit; - whence bas-a, a dwelling; ni-bas-i, inhabitant; bas-ti, village. The continuative form of this verb occurs in bas-ti-tia, to settle permanently (Idb. *bes-k-, to continue to be or dwell; the continuative verb-suffix appearing as -k- in Santali & Basque, & as -ge, -age in Zulu). From the extended verb-root come the names Baske and Bask-al-dun, a Basque; Baska-ra, the Basque language; & Bask-al-harri, the Basque country.

11. The chief exotic elements in Santali can be traced to local vernaculars such as Prakrit, Bihari, Urdu & Bengali which have added to its vocabulary without affecting its grammar. That this borrowing, however, has not been all one-sided is a fact well-known to Aryan philologists. Indeed, the former prevalence of Kolarian languages throughout the Gangetic Valley & Central India would lead one to suppose that Aryan speech might have drawn large credits from Old Santali & its cognate dialects, - as now evidenced by that great body of roots & parts of speech, nominal, verbal & inflectional, which are common to the Kolarian & neo-Aryan tongues. When this so-called exotic element can be traced into Basque & Bantu, the theory of its Aryan origin becomes untenable. If it be truly local, then its Indo-Bantu origin cannot be proved.

For example, if Santali *chepre* be called an Aryan loan-word because it is the same as Sanskrit *chipita*, "flat-nosed", the Aryan origin of its Indo-Bantu cognates in Aini, Basque & Zulu follows logically. Likewise, Zulu *aliziyo*, heart (Idb. *krid-ijo), from a root meaning "to pulsate, throbb, shake" (Basq. *kiritu*, to shake), might also be claimed to be derived from Sanskrit *aridaya* (Indo-Germanic *krid-ijo-), heart.

12. By way of comparison, a few examples may be adduced to show that Santal roots which appear in Basque, are also found in Sanskrit, but in neither case is their Aryan origin established.

SANSKRIT.

SANTALI.

BASQUE.

akshaja, walnut-tree.
ardha, half, middle.
bala, strength, power.
bahu, arm, forearm.
Deva, God.

eka, one

guna, quality.

guru, parent, teacher.

hari, hold (in the hand).

jajha, leg.

kata, speech, word.

lana, corpse.

mrid, to rub.

narikera, coconut.

pitta, gall.

sira, an issue of blood.

svar, heaven, sky.

-t (=d); ablative suffix.

thakura, a deity.

valala, bark of a tree.

vas, to dwell.

yava, barley.

akhyet, walnut.

ardha, adha (=rdha).

bal, bol.

baai (=bhagat),

deva, deb, dec.

eka.

guna

guru (=Ainu guru)

har (Idb. *ghr-).

jaaga (Idb. *gaagha-)

kata

lana.

ward-ao

narika, narikel,

coconut; from

nar, fibre, kola, nut.

pit

sira

ser-ao

-ete, -te, from;

(ablative suffix) (ablative suffix)

thakurju.

bakla (=vala).

bas, bas-ke

jao (Idb. *yava-)

acolo, walnut-nut.

erd

anal, al (=yal)

elbow. beso, arm (=begio)

dzipo, zipo (obsolete),

as in Ala Dzipo. By God!

-ila, -aka (obs.), and

as in nam-aka, nam-ila,

eleven (=ten-one)

-guna, an abstract

suffix denoting quality.

gurasak, parents; from

gur, to reverence

gara-tu

zango

hitz, word

loti, body; il-loti,

"dead body", corpse

maru-tetu

arkola, oakum, tow;

from 'nari > nari,

fibre, thread

beazun

caira, olio

zer-u

-ez, -z, from;

(ablative suffix) (ablative suffix)

tusurin, the Devil

achal (=yachal)

'ues in Bush-aldun

gara-gar (=Idb. *yeyar-).

13. "From the circumstance", says Dr. Hodgson, "that the Sanscrit consonants as finally developed, precisely fit Santal speech, without either deficiency or redundancy, it appears likely that the aboriginal race whom the Aryan immigrants chiefly dealt with, & from whom they supplemented their consonantal sounds, spoke a tongue phonetically cognate to Santali. The fact that several Santal words are to be found in very old Prahrit gives additional likelihood to the conjecture". (Annals of Rural Bengal, p. 158).

This phonetic similarity is, however, only partial, for Santali has been reducing its alphabet ever since it severed its associations with Indo-China, & a superficial comparison of the Santal, Basque & Bantu alphabets shows how far this cultured Indian tongue has rid itself of many harsh-sounding fricatives which are unduly prominent in Basque & Bantu. It may even be that others have been dropped since Sanscrit ceased to be spoken, as Sanscrit *v* & *sh* appear as such in the Mahle, Kiri, Savara & Kuria dialects but ^{are} identified in Santali with *b* & *s*.

Neither chance nor coincidence has produced that identity of alphabetic sounds which is the most obvious feature of the Sanscrit & Santali alphabets. Their common antiquity argues the

fundamental character of both alphabets. Nay, moreover, the same sounds should have the same values, the one in primitive Indo-Germanic, the other in Indo-Bantu speech is a problem difficult to solve; unless one were to postulate the former existence of a great sub-stratum of Indo-Bantu languages between Bengal & Western Europe, on which the whole edifice of "Indo-Germanic" speech is reared.

14. The principal sounds common to the Sanscrit & Santali alphabets are these :-

Stops...	k, t, p, g, d, b.
Aspirates.	kh, th, ph, gh, dh, bh, h.
Palatals.	ch, chh, j, jh.
Cerebrals.	t, d, ta, da, n.
Fricatives.	s, sh (Sant. s), v (Sant. b).
Nasals.	m, n, ñ, ñh.
Liquids.	l, r.
Vowels.	a, e, i, o, u, ri, rī.
Semi-vowels.	w, y.

Where the Sanscrit sounds k, t, p, g, d, b, kh, th, ph, gh, dh, bh, are known to have had equivalent values in "Indo-Germanic", the same sounds in Santali under normal conditions will be found to have the same values in primitive Indo-Bantu.

15. As front stops are more liable to phonetic change than any other class of sound, they have developed a peculiar habit in Santali, Basque & Zulu of being ^{breathed like} aspirates, owing to the addition of a slight aspiration. If this change does not take place, they may tend to move in the direction of the fricatives, the palatals shifting farther back until they become the deeper gutturals known as velars, such as χ and γ in Bantu. The velars are a common feature of the three groups of speech but their history can best be understood from their sound-shiftings. Basque & Zulu have both eliminated the voiced aspirates, although some scholars, notably Sir H. Johnston, Louis Bryant, believe that they are not extinct. "There is much aspirating of consonants in numerous groups of languages, the aspirates kh, th, ph, gh, dh, bh [cf. Zulu bh, according to Bryant] having to be pronounced separately & with their true values k-h, t-h, p-h, etc." (Comparative study of Bantu & semi-Bantu languages: p.39(n.)) Of fricatives Basque & Bantu have a rich variety, & their importance is of a kind that leaves no doubt of their antiquity.

16. A comparative survey of the existing alphabets, Santali, Basque & Zulu, gives the following list of sounds which are the common property of the three groups of speech, & can be definitely assigned to the parent-alphabet.

	SANTALI.	BASQUE.	ZULU.
Faucal	H	H	H
Guttural	K, KH, G, GH	K, KH, G	K, KH, G
Palatal	CH, CHH, J, JH, Y	(CH, J), Y	(GH or TSH, J), Y
Dental	T, TH, D, DH	T, TH, D	T, TH, D
Cerebral	T, TH, D, DH		
Labial	P, PH, B, BH, W(β)	P, PH, B, W(β)	P, PH, B, BH, W(αβ)
Sibilant	S (sh, Z in dialect)	S, SH, Z, (J for ZH)	S, SH, Z (J for ZH)

To these might be added others from Bantu dialects which would easily fill up the lacunae of Zulu; e.g., the aspirates gh, dh; the Fricatives χ and γ ; the cerebrals t, d, s, z, sh, zh, l, r; the palatal-sibilant zh which in Zulu is rendered by J or Tan indifferently. Again, w, y sonant have to be distinguished from w(u), y(i) consonant, owing to their dual character as semi-vowels & spirants. As regards liquids, there are some strange divergences among the various groups. Zulu has l, but no r; although both are common to Bantu. Ainu has r but no l. Basque has no r initial & scarcely tolerates l. Yet l is not unknown to Ainu dialects, & initial r can still be traced in old ^{Basque} compounds (cf. *Euska-ra*). Santali is more conservative than any of these, for it has *not* retained l, lh, r, ra, along with the vowels xi, xhi, xī, xhī, li, lī. The nasals include velar ñ (Eng. ng in singing), n or ny (Basq. ñ) palatal, n dental, m labial, & m labio-velar which easily betrays itself by the character of its sound-shiftings. In Bantu dialects are also found n cerebral, & the aspirates mh, nh; so that the list is fairly complete.

17. At first sight, Zulu appears to be deficient in gutturals, but the Hottentot clicks have usurped the place of at least a dozen, - palatal, velar, & palato-velar; & only by the closest scrutiny of their sound-shiftings can their original character in Old Zulu be detected. Ch, J in Basque & Zulu are now affricates rather than simple sounds, but in Santali ch, chh, j, ja are pure uncompound palatals, pronounced as in Bengali & Uriya, & not with a hissing sound as they would be in English. The palato-sibilants are sh, zh (š, ž) the former being common to the four

groups but in Santali is identified with ɹ which is pronounced as a relate-sibilant & not as a true dental. To represent English ʒ , the sibilant ʒ may be used, as in buruʒ , brush. The voiced ʒ or ʒ (=French ʒ in *jour*) occurs in Kharanga, Mirwan, Nika, etc., & seems to be indigenous to Bantu as to the Indo-Chinese area. ɹ , ɹ cerebral are found in Venda but their history is at present obscure. The dental fricatives s , z are common to Kolarian, Basque & Bantu speech, & as Indo-Bantu ^{sounds} their antiquity seems unquestionable. The labio-dentals are of comparatively recent origin, being alien to Ainu, Santali & Basque. They are met with in words of foreign origin, & in Zulu are invariably to be traced to the labialisation of consonants by w or y . In modern Zulu, the bi-labial fricative β cannot be distinguished from the explosive b . The former is made by contact of the lower lip with the upper teeth, the dental character of the sound being more evident in the labio-dental β or bv . But their affinity is so close that in Zulu, & Bantu generally, both are constantly interchanged. Hence, as the difference can often only be distinguished by etymology, we represent the pure Indo-Bantu voiced labial fricative by the Greek symbol β (Beta), which ^{sufficiently} indicates its affinity to the voiced explosive b , although its character is distinct.

12. The modern Santali alphabet contains at least 55 distinct sounds, 26 being vowels, & four semi-consonants called checks. These are pronounced "by partly inhaling the breath & simultaneously closing the throat & the respective organs, & not allowing the breath to touch them at their reopening, but letting it pass unarrested out of the throat; thus an abrupt half-consonant is produced". (Skrefsrud's Santali Grammar, p. 8). When intervocalic, & sometimes final, they are often ^{their} voiced, so that intermediate character between breathed & voiced sounds is apparent. They seem, in fact, to be the last surviving relics of a special class of consonants intermediate between the breathed & voiced series; & may have survived from an earlier stage of linguistic development when the language was destitute of all voiced sounds.

The checks are written k' , ch' , t' , p' , & are a class by themselves. A curious resemblance between Santali & Zulu in this respect may be noted, for the existence of intermediate sounds

has long been known in Bantu, where the paucity, or even total absence of voiced explosives is often very marked. Indeed, several of the more archaic type in East Africa so confuse k, t, p, with g, d, b, that the latter can hardly be regarded as voiced stops because of their uncertain & fluctuating character. Without illustrating this from Lumsaba or any other dialect noted for the fewness of its voiced stops, it is more important to trace them in Zulu where the intermediates still exercise an important influence of their own. Bryant calls them the "close or inspired sounds" of k, t, p, because they are arrested sounds which are deprived of all explosive force. He distinguishes them carefully from the open or expired explosives which are accompanied by a certain amount of aspiration, whereas the former are never so aspirated. Thus, k' is something between a hard g & a soft k; intermediate between a hard d & a soft t; p' intermediate between a hard b & a soft p; s' intermediate between s & z; sh' between sh & zh (now j); f' between f & v.

Wherefore we conclude that there may have been a time in the history of Indo-Bantu speech when voiced consonants did not exist; when there were only the breathed sounds from which were evolved at a later period those secondary or intermediate sounds, ere the fully voiced consonants of the more cultured languages came into being. It is doubtful if Afri ever possessed voiced sounds. It is still without them (except g, d, b after the nasal) & not likely to develop them now. That the voiced consonants of Zulu have not yet reached maturity is suggested by the survival of intermediates as well as from the rare use of g, d, b medially except after the nasal.

19. Intermediates and their sound-shiftings.

A. SANTI.

K'g: budrek', budrag, arrogant; thok, thag, to deceive, swindle; buk', bugek', hole (bogoch', to make a hole); gok', gugu, to carry on the back; buk'buk', buoch'buoch', to chatter; meukok', meukoch', to smile. It is sometimes elided, as in bik', bi, to be satisfied; bangorek', bangorae, black; buelũndi, goat's dung (from bukh', goat, lãundi, droppings).

q' velar. This sound is palatalised to ch' before y(i), but before

heavy *i* is dentalised to *t'*; e.g.,

q'i=t'. narrak; narrat', fishes' gills; thoekot', thoekot', lean, emaciated; thek're, tetre, anointers.

q'yi=ch',t'. bendreck', bendret', betret', puny.

ch=j'. hech', to come, hejuk'-as, he will come; goch',gujuk', to die, to kill.

t'=d. met', eye, medok'hane, he is suffering from inflammation of the eye.

p'=B. ap',abok', to wash the hands & feet.

B. Basque.

k=g. kai,gai,taing; kalitcha,galitcha, a wart; kalerna,galearna, tempest; kambara, gambara, room; elkar,elgar, other; urgetau,otter(=ur-katau,water-cat); oarikaben, careless(oar, oare, gabe, without); gaitz,bad,zori-kaitz,bad luck; kin,with,esa-zin,midwife.

ch=j. kekeria, keja, care.

t'=d. dembora, from Latin tempora.

p'=b. pertz, bertz, boiler; poz,boz,joy; pikor,bikor,piece; parrasta,barraska,handful; berri,new,jayo-perri,new-born.

s'=z. samin,zamin,bitter; sortna,zortna,heavy;sin,zin,oath; setabe,zetabe, a sieve; sinistu,zinetsi,believe.

C. Z u l u.

k=g. keveza,gaveza, be wide open; kitaza,gidaza,to tickle; gedeza,keteza, chatter(Sant. knotknot): gegezela,kekezela, trot;gidala,kidla,to load; kabangula,gabangula,to do strenuously;giba,kipa,take or put out; in-gongoni,in-hoa-:koni,brindled guu;kanzinga,ganzinga, roast mealie-grains;

ili-kwence, -gwence, a deceiver: um-takati, Angoni & Tabele um-tagati.
t'=d. tengeza,dengeza,to handle delicately; tepula,depula,break off,snap;twanla,dwanla,eat soft food; ulu-dodovu,^{um}-totovu, a person worn down by sickness; talasa,dalasa, to turn up the buttocks;tentebula, dende-bula, strip off; ili-tenge, -denge, a frail thing or delicate person.

p'=b. kepa,kopa, curve the back;pefuzela,befuzela,gasp; dalondalobala,dalongopala, to be in a towering passion; alepula,nebula, to chirp;panyaza,banyaza, to gaze at with shifty looks; pekuza,bekuza, turn up the buttocks; um-palo-balu,cave; -penge,-benge, a small basket; -pam, -baim, branch of a forked tree; pinyaza,binyaza,to eat voraciously.

- shaza. Shalaza, jalaza, be always on the move; anisha, jija, jinga,
to draw out longwise; isi-ansqaba, -jagaba, a robust man;
tsutshumba,
jujumba, ~~tsutshumba~~, ache painfully; jongolo ela, tsongo-
lozela, pour out; sawaza, tanwaza, sawaza, to rustle; anapasa
tsanwaza, squirt, discharge; shobela, tsobela, go out of sight.
- n=2. Safuna, zafuna, scoop up with the hands; sibekala, to cover;
ziba, to cover over; sibakula, sibukula, uncover; nōfoza,
zāvu, be gaping wide; si, not, zila, to abstain from.
- f=v. zāfo, zāvu, to be open; folozela, volozela, to coquette;
ase-folofolo, -volovolo, fat of meat; fukuza, vukuza, to
lift, raise; fafazela, vuvuzela, sprinkle; fucuzo, vuculula,
garner, glean; -fukumfuzi, -vuku-zane, a mole.

20. After these preliminary observations on the Polarian,
Basque & Bantu languages & a brief general introduction to the
theory of their common origin, we shall conclude with a summary
of the principal sounds which formed the Indo-Bantu alphabet.

The organic basis or basis of articulation has been shown
nine
to be the Λ primary sounds, k, t, p, ka, ta, pa, a, s, w, which are common
to Santali, Basque & Zulu, & from which are derived the secondary
or voiced sounds, c, d, b, ga, da, ba, y, z, β . The so-called intermediates,
k', t', p', ca', sa', wa', which are neither breathed nor voiced, are sup-
posed to belong to that period of organic development when the
pronunciation of true voiced sounds had not been standardized or
fixed. It is possible, therefore, that in the Indo-Bantu parent-
tongue of 20,000 B.C., the secondary sounds were not so fully
voiced as we find them to-day. But the relative stability of both
series in Santali, Basque & Zulu, which permitted organic shifting
to proceed on a large scale, & that without any apparent confusion
of sound or interference with the homogeneous character of the
different groups, is indubitable evidence of their high antiquity.
These 18 sounds, primary & secondary, breathed and voiced, represent
the basic alphabet, without which phonetic laws do not exist.

21. Largely owing to the loose phonetic methods of grammarians,
back & throat sounds, palatals & velars are usually rendered alike,
yet the difference has to be discerned if philology is to be
scientific. They are responsible for phenomena which could not be
explained without them: & these, again, have originated an equally

- sh=za. Ssaluza, jeluza, be always on the move; saisha, jija, jingo,
to draw out longwise; isi-sangaba, -jagaba, a robust man;
tsutshumba,
julumba, tsutshumba, a ache painfully; jongolo-ela, tsongo-
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CHAPTER III

CONSONANTS

GUTTURALS

important series of gutturals, - the labio-velars, or velars pronounced with a slight labial affection. Thus, from the evidence of philology, we have to admit into the original alphabet at least four series of gutturals, viz., palatal, velar, palato-velar, & labio-velar. Each series is independent & can best be recognised by permutations of sound which are as uniform as they are remarkable.

21. Table of the more important sounds of the Original
Indo-Ban'tu Alphabet.
A.
(Bengal, Indo-China, South China.)

	EXPLOSIVES.		ASPIRATES.		FRICATIVES.		NASALS
	Breathed	Voiced	Breathed	Voiced	Breathed	Voiced	
Palatal	K	g	kh	gh	h	y	ɳ
Velar	q	ʒ	qh	gh	χ	γ	ŋ
Palato- Velar	ʃ	ʒ	ʃh	ʒh	ʃh (ʃ)	ʒh (ʒ)	
Labio- Velar	qu	ʒu	quh	ʒuh	χu	γu	m
Dental	t	d	th	dh	s	z	n
Cerebral	t̄	d̄	th̄	dh̄	ʃ	z̄	n̄
Labial	p	b	ph	bh	w	β (v)	m̄

B.
Proto-Ban'tu and Proto-Ainu.
(As Indonesian languages with
Intermediates in lieu of
voiced consonants.)

	EXPLOSIVES.		ASPIRATES.		FRICATIVES.		NASALS
	Primary	Derived	Primary	Derived	Primary	Derived	
Palatal	k	k'	kh	k'h	h	y	ɳ
Velar	q	q'	qh	q'h	χ	χ'	ŋ
Palato- velar	ʃ	ʃ'	ʃh	ʃ'h	ʃh (ʃ)	ʃ'h (ʃ')	
Labio- velar	qu	q'u	quh	q'u'h	χu	χ'u	m
Dental	t	t'	th	t'h	s	s'	n
Cerebral	t̄	t̄'	th̄	t̄'h			n̄
Labial	p	p'	ph	p'h	w	u	m̄

CHAPTER III.

CONSONANTAL

COMBINATIONS.

A.

PALATALISATION by Y or i-consonantal.

1. Y has three values in Zulu according as it is consonantal (breathed & voiced) or the semi-vowel. With the nasal it becomes NY (=Basque ñ). The original voiced variety has also been traced in East Africa, so that its place in the proto-Bantu alphabet is well assured. In his *Leitfaden der Bantusprachen* (p. 98), Meinhof observes that voiced Y occurs in the Mombasa dialect of Swahili, where it is "sehr weich gesprochen", where the Mombasa dialect has this y-spirant, the Zanzibar dialect prefers the closely related j-spirant; e.g., Mombasa ya, to come; yas, to be full; Zanzibar ja, to come; jaa, to be full; waja, to soak. A further change can be noted in these dialects when y passes into z, apparently through the intermediate stage of the palato-sibilant za or z^h , but with incomplete assimilation.

2. These permutations of breathed & voiced Y may be stated thus:
 Breathed y = h (rough breathing); ca (spirant); sa (palatal); z^h (palato-sibilant).
 Voiced y = i (i-consonantal); j ("); za ("); z (").

The difference between y & i is often not very clear, but in any case the use of the special symbol i helps to draw a wide distinction between the consonantal i, y, & the vowel i. The i-sound vanishes after palatalizing the preceding consonant or may get itself inserted into a preceding syllable which then develops an i in the root. Hence, Zulu u may pass into ui (wi), then i; as in ku, to, at, ki-ti, chez nous; ki-ti, chez vous; um-kumu, um-ki-wane (= ku-wane), wild fig; um-ou, morsel, ili-owiyo, ili-oiyo, tit-bit, ili-goiwane, a small mite (= ou-wane); ubu-cubu, -cwibi, a chick, small fry; pum-isa, pin-isa, cause to go out.

3. Spirant Y in Zulu regularly interchanges with spirant j, or z when dentalisation is complete. Owing to the loss of the old palato-sibilant za, Zulu seeks now to represent it by j & z indifferently, such fluctuation showing that the sound wanted is the voiced variety of sh.

[illegible]

The true value of *Y* depends on its origin. It may represent the explosive *g* devoiced; hence the *Malu'* change of *g* to *y*. Or, it may be derived from an *l* producing *y*, which is a common feature of coast dialects-East Africa or Zululand. It may be the devoiced form of the velar fricative *ɣ*, for some dialects like Herero, regularly soften *ɣ* to *y* (See Meinert's *Lautlehre*, p. 29). When original, it is a true spirant but not the same as *ɣ*-consonantal which is the semi-vowel *y* strengthened to a consonant. It may precede a vowel, e.g., *y'ini* for *ku-ini*. As a euphonic particle, *y* can be placed before nouns, pronouns & adjectives beginning with *i*. When it follows a vowel, the true sound is *i*-consonantal; for it is by *i* that we get the diphthongs *ai, ei, ii, oi, ui*; & as already shown, even where this consonantal function is dormant & unexpressed, its influence is directed to the modification of neighbouring vowels if it does not affect the consonants. Thus, from *lal-a*, to sleep (active case of the root *lal*) comes the locative *lal-lal-i*, a sleeping-place (*-lal-li, lal-i*).

2. The chief sound-changes caused by y (or i) are most easily observed in the formation of the Passive voice of verbs, of diminutives, & the locatives of nouns. The first is due to consonantal i which is present in the suffix $-i$ -a, $-i$ -a, $-i$ -a, or its proto-form type being $*-iywa$, according to Meinhof; but in reality, it is the $-i$ -a dative of an $-i$ -a stem, by which the passive is formed in Fijian & Bantu, as well as in Aryan (e.g., in Sanskrit, where this suffix $-i$ -a is always accented in the passive voice). The Old Zulu suffix was $-i$ -a, which became $-i$ -a by the addition of the infinitive-ending a ($-i$ -a. $-i$ -a.).

5. The second change is likewise due to *i* in the distributive suffix -ya-na, -ia-na (Zulu -yana, -iana, -sana, -sana), e.g., i-nyona-yona, fledgling (fr. nyona, bird); i-ahonyana, colt (= *kam-yona); i-ahu, flying ant, i-ahu-sana, small ant. The third change is

explained by the fact that in Old Bantu there were two different locatives in $-\hat{i}(-i\hat{i})$ and $-ni$ which were sometimes combined to form a double locative. In this there is nothing singular, as many Bantu dialects have a liking for double locatives. When $-\hat{i}$ is not prefixed, no sound-shiftings occur; e.g., $bili-ni$, "body-in", entrails. Otherwise, the combination $-i\hat{i}-ni$ (or $-\hat{i}-ni$) produces the same phonetic changes which appear in diminutives & verbal-passives. These permutations may now be summarised & illustrated.

0. ALCO LAKE OF MINNESOTA CHARTER.

5. Breasted Frigates.

$$2, 3, f + i = 12.$$

h = sh. hamuka, ~~hamuka~~, shwamuka, to get vermin:

usa. *sumula*, *sumula*, *sumula*; u-swano, u-shaba, a large fat
usa or beast; ili-sungulolo, -sungulolo, millipede;
sumula, *sumula*, to shuffle; *sumula*-*sumula*, *sumula*-
sumula, to do st a speed.

(But in Urdu, the combination hai is allowed; cf.,
ho hai, to tie, ho hai to be tied.)

4. Voice Activities.

$$y(1), z(1), y + i = zh$$

(3)-sh. jongolesais, tshongolesais, to pour out: jujule, zuzule, split, sever: jujuba, tshvshumba, to have an ending point: juba, zuba, to fly off in cups. Florin here uses the dental click ~~gagagaga~~ as a note on the west of sh. ~~sh. gaga~~
Zulu: juba, im-joni, yowu: Ndebele: zuba, -zuba, zowula.

z(1)=zi.lobn, eaten fish(Tette tunc: *Thyanema downsi*) plumelo,
to greet(*Synobala zumbile*). Wawa, Wlondie uses the
dental click o without aspiration(or else tai).
Zulu:zanda,lawula, large, lota,libala,lwa,lobela,ili-liba.
Wlondie:zanda,awula, zanga,cetha, cibela,cua,cobela,ili-tai

$\psi(u) = 21$.
 iai-vu, -ju, range of a projectile; vunguzi, jonzoni, juvuzi;
 iai-vuiz, -juiz, piece, section; vuhuh, jugula, break in
 two; vula, rain (Korova culture).
 On palatalization with i , v in Hlonfra becomes the
 soft dental click q .
 Zulu: vuvu, vava, vuvu, vutava, vutav.
 Hlon: vuvu, vava, vuvu, vutava, vutav.

Wishes and Prayers.

For the purposes of this phonology, these sounds are grouped, theoretically, into ^{two} classes, -breathed & voiced, according to their sound-shifting & without regard to their pronunciation.

5. Breathed clicks.

$$q, q_1, 0, q_2, x, y + 1 = sk.$$

q=aa. shuqulaa, shvshuluzi, to drink off, to grip: qvi, shulu, only one. But in Hlonine, the click q before i passes into the lateral click x. Zulu: qabaka, qaa, qambaa, qata, qaana, qamba, qina. Hlon: xabaka, aa, xambaa, xata, xana, xamba, xina.

6-22. ili-ndipidi, ili-piskirisi, a crafty talker; cidi, -cwebe, pond, lagoon (Monga name); un-akula, -amongo, a small earthen pot; ili-cala, fault, blennie, anything bad, (Sutu lo-tjale), un-ke, un-te, un-we, to go bad, to turn out wrong; xwe, cwee (Hlon. cwe, xwe). In Hlon's a before i causes into the elick x (xerol; sh). Kululu-baif, caba, canda, cawa, cortex, ili-cikini. Hlonulu-ikani, waba, wada, wawa, woxen, ili-xiriri.

Per cent. $\text{BaCl}_2 = 11.01\%$

Julius shown, wife, deceased; name, to rub.

Plant: wood, bark:

Kesh. xwaxia, xwaxia, to xwax about, xwax, to xwax or
 move about, xwax, xwax about. In Hlonke, the *i* is
 vocalised & the nasal prefixed. Hence Zulu xwaxia. *ni(n)*:
 Zulu: xwax, xwax, xwax, xwax, xwax.
 Hlonke. xwax, xwax, xwax, xwax, xwax.

6. Voiced clicks.

q', q'h', c', c'h', x', x'h' + i = zh.

q', q'h' = zh. *isi-aiqhi*, a separated clump or cluster, or spit of spit of land (*Qanda hi-singa, island*); *qalesa, uqelom*, to stare about; *isi-qia, isi-in, dog: qhā, nyē*, to do, or be done completely. Here, *Monipa* has the palatals *isi* & *y*, or also the soft click *ga* (-q'palatalised).
Dulu: isi-qobi; qala: isi-qubala; qoka: isi-qyoo.
Wlon: isi-qobi; yila: isi-talekela; qoka: isi-qafu.

c', c'h' = zh. *muwa, muwa, steel; un-qoiko, isi-jingo*, leaves put on surface of water in a vessel to prevent it boiling; *oia, extinguish (Mbariko, Tongo fire; Swa. oia; Bworo dāa)*; *oia, look, come (Hr. dāda)*; *cola, sprinkle (Horo waa)*; *neene, little (in compounds -waa, -jane, -gaa)*.
Dulu: caba; oia: tania; isi-qutaa.
Wlon: tania; tawa; cola: isi-qutaa, isi-woa.

x', x'h' = za. *isi-xala (Gant. hi-ir)*, *kingfisher, u-tongo-colo, the brown-headed kingfisher; xakasa, xakasa*, to rattle the spears; *xakata, xakata*, to be loose or shaky.
Dulu: xaa, juyala; xaba: xabula: isi-hope; ut-woa.
Wlon: xaa; xampala; xaba: xabula: isi-xaa; ut-woa.
 (In the last two instances, *Monipa* shows that the click x', x'h' is voiced because it represents a voiced sound in *Dulu* which has been labelled to b.)

7. Breathed linguists.

h', l' = sh.

h' = sh. *alantila, alantila*, to go rushing along; *alimikaa, alimikaa*, to wipe or rub off; *alolo-cala, shoocacala*, to start with pain; *alua, to lessen (Swa. auua)*; *u-alaba, alu (Swa. auabiri)*; *in-aho, aad, in-aho-besi*, a head-ornament (Fr. *basi*, to glitter).

l' = sh. *hila, hinksha (= h'isha)*, to enter, entrance; *isi-lani, isi-lanzi*, a white orange spot on the eyeball due to contact; *oalelewa, oalelewa, smooth; alalela, alalela*, to rattle along; *lalela, alalela*, to rattle up quickly; *alopula, lopula, torula*, break off in pieces, -*lani, piece*.

8. Voiced linguists.

h'l, dal + i = sh.

h'l = zh. (Zulu *h'l* = *Wlon* g, go or b on labialisation by y.)

a. *Dulu unu-ala, un-ala* = *Wlon* unu-ge, un-gola.

b. *Dulu un-alabetai, ground-Wlon* un-arba, un-guatai.

c. *Dulu alakanipaa, to be clever -Wlon. cakanipaa, bakanipaa.*

d. For al, the voiced palatal y, ay may be used in *Dulu*.

cf. *aloula, youla*, to tear; *alakasa, xakasa, yaka*, to rattle the spears.

ahl-ah. ahl-ah, to stick her into; is-ahle, Hlonse
 is-ahle, a circular net, grass fastening on roof of
 hut; bibihle, bibie, to claver at the mouth;
 un-ahle-dhle; un-ahle-so, back-bone; dale, to eat
 (Hlonse ya, 3e): in-dhle, ear (Hlonse ya, ear, 100
 of the ear); in-dhle, elephant, Hlonse ya; un-ahle-
 zale, wave-zale, to spread like a blanket.

In the Gama dialect of the Ancient Zulu gl occurs for
 zl ; as in gl words like gl , to eat; in-glowe, p-glowe,
 (Hlonse in-glowe): a-glowe, elephant (Hlonse in-glowe);
 li-glowe, about (Zulu li-glowe): a-glu, house (Zulu
 in-glu); and it would, therefore, ^{see my} not under normal
 conditions, ghl in Zulu was palatalized by i , should
 pass into ghl , zhl , provided, that is to say, that the
 palatal was originally followed by a liquid. Where it
 was not so followed, the liquid cannot be primitive, but
 must have developed from a neighbouring sound. Thus,
 in dhole-glowe, ear (Cr. Idh. *krey-, to hear); dhole,
 glowe, elephant, (Idh. *heru-, ear); the liquid is known
 to be primitive: whereas in is-ahle-e-l-ahle, and (Gama
 dialect) & in-dhle-e-l-ahle (Gama), road, the liquid
 is not primitive, because the Indo-German roots were
 *qeyq, and (Sant. tihi) and *ghara (Sant. wra).

According to Heilmann, h before heavy \hat{y} becomes shye,
 & g before heavy \hat{y} becomes zhye; whence these liquids
 are taken to originate. But, so far as Zulu & its dialects
 are concerned, the y may sometimes arise out of an older
 l or r , in such cases where it can be proved so, the
 liquid after the palatal, or velar fricative as the case
 may be, being either original or developed from a
 following palato-dental sound. Words, by palatalization
 with i , are obtained Old Zulu $\chi\text{r}, \gamma\text{t} = \text{gr}, \text{gr}, \text{gl}, \text{gl}$ (now
 al, dal): & Old Zulu χ (χsh), (χzh)—corresponding to
 Heilmann's „mit Rauschlaut"—for χ, γ before heavy \hat{y} ,
 followed by e or i (now al, dal).

Zulu dal = Hlonse g, go, ago.

Zulu: dila, dhale, dle-indle, ulw-andle, un-alandale.
 Hlonse: ages: azele: ulw-ingee: ulw-ange: un-angee.

7. Palatalization in Santali and Bhojpur.

It has previously been observed that sh, zh are
 numbered among the lost sounds of Santali, which can, nevertheless,
 be traced in other Volaparian dialects. They are ubiquitous in the
 Tai-peto-Hakka & Indo-Chinese areas, & their antiquity seems beyond
 dispute. Probably, therefore, in some more primitive form of Santali,
 sh, zh must have existed alongside the palatals $\text{ch}, \text{dh}, \text{f}, \text{gh}$,
 but their former existence as distinct sounds in old Santali or
 Bhojpur can only be inferred from the evidence of their sound-changes.

For *ai* and *ai*, Basque has substituted the affricated *ai* (st-sh) & *j*, the latter having two sounds, that of English *y* in French Basque, & of Spanish *j* in Spanish Basque. Thus, although there is an affinity between *ai, j* in Basque & Santali, they represent different sounds. Those of Santali were formerly mentioned as being simple, uncompound palatals, -*ai*, for example, being somewhat similar to ^{the} soft aspirated *ś* of Sanskrit *Śiva*, or as a very soft *ai*, with as little sibilisation as possible. Its aspirated variety is written *ai*, & the corresponding voiced sounds are *j*, *ja*. To produce, therefore, a sound in Santali which could really approximate to that of Basque *ai* or Eula *ai*, we should have to write a double palatal *aii*, the compound character of which is sufficiently obvious.

Notwithstanding the difference between Santali and Basque *ai, j*, there can be little doubt that they used to represent the same values, although they are not in phonetic accord. The Santali palatals are very likely much nearer to the original sounds, while it is equally clear that those of Basque are more remote because ~~anatomical~~ affricates like *t-ai* or *t-sh*, *d-sh* or *d-j* are of recent origin. As only a Frenchman would pronounce these palatals correctly, viz., *chai*, *jai*, the Indo-Bantu symbols are not rendered by the Santali consonants *ai, ai, j, ja*, but by *ā, ā, ai, ai*, *sa, sa*, according as they are explosive palatals, explosive aspirates & fricatives.

2. Palatalisation in Santali.

A. Palatals.

kap.	chak'chak', choon'choon', to chatter;
kh-gh.	nikhore, nichore, faultless, unalloyed;
g-g.	gij-ri, curdled milk, jamo (for ^{ga jmao} , Basq. <i>gatzatu</i>) to curdle; jivet', to live (Idb. ^{gijv}).
gh-gh.	gacolo, to obb & flow, jallo, to swing back & forward; jango, foot, leg, fr. ^{zhanggo} (Idb. ^{gheghh}), Basq. <i>zango</i> .

B. Dentals.

kap.	tij, chij, taling; tor-lao, caer, to melt; thango, thong, bamboo tube; hunter, buaster, exceed; tests, chests, camlins.
th-gh.	thop', to make a tapping noise, camp, to point; tharok', short, thapora, short, small, campra, campra, short;
d = g.	kodo, kodo, to bend, stoop; gun (Sansk. <i>dyū, dyūta</i>), a game of dice; pashil, pashil, excess, surplus.
dh-gh.	nidini, nini, stand with the feet wide apart; nonda, nonda, weak feeble; sidu, sojao, straight.

C. Labials.

The labials in Santali & Bhasque are now invariably vocalized to a and y (for ea, i devocalised), which represent the velar rather than the labial sound.

a = (g). ruphā, ruhā, lean, associated; gape, gape, careless; to or, to or, orphan; to, to, to (Sancr. sativ), Bhasq. tau, Zulu coffee, - all from an Idg. verb *wē-ai, to spit.

o = (g). dohra, double, dohra, to double.

pa = (ga). Hiniiri-Si iri, Paradise; hāre-phare, quickly.

ba = (ga). bhari, havi, to pay in kind.

9. Palatalisation in Bhasque.

A. Palatale.

k = g. kaika, kaeka, a milking-calf; taina, taeka, blemin:

g = g. gosa, gosa, to go; gosa, gosa, to rejoice; gosa-gun, gosa-gun, innkeeper, landlord; gente, people (Latin gentem), Santali jet, people, race, caste.

ka-ga. (caret).

ga-gi. (caret).

B. Dentals.

t = g. chamboilin, a player of the tambourine (fr. Sankha tambolin).

ta-ga. (caret).

d = g. dastata, jastata, to taste; deinau, teinau, chill, dexterity; dastorretz, jastorretz, needle; dahi-regi, college, jekin, to know:

da-ga. (caret).

C. Labials.

pa = (g). pama-pama, suddenly; pabara, protection, near-abe, child-guardian;

pa-ga. (caret).

F. ICATIVES.

b = (g). bobish, oar, gums of the teeth; nebia, a-bave, brother; bokarri, charri, bring, carry; boras, nome, iron art; illobi, illobi, coffin.

ba-ga. (caret).

w, u-ga, za. tau, to spit, for *wē-; eistu, istu, to spit, for *wē-; wē-tu: cf. Sant. eī tau, to feel disgust for.

10. It frequently happens that the assimilation of the velar is incomplete, the sound being modified to that of a dental sibilant in some dialects or even in the same dialect, when others show complete assimilation. This phonetic peculiarity can be illustrated more easily from Santali dialects than from Santali, Bhasque & Zulu, but only a few examples need be given.

In Nlondze, Zulu β (for bi-labial β) sometimes appears as λ or γ , the labial sound being entirely lost. Similarly, the unvoiced labio-dental becomes λ , or γ .
Zulu: β anga, β ona; β aka, β una, β unda.
Nlond: anaa, yaa; aka, una, unda.

The initial labial fricative β before i is dropped in the verb cefiya, to spit, which seems to be derived from a type *zhviya, earlier *uzhi-ia. [cf. 8(4)]
Thus, the Santal word tae, Beag. tau, Old Zulu *uzhi-ia (Idb. *piu-ai), to spit, are seen to be the same.

14. Breathed clicks.

c, ca, q, qa, x, xa = s.

c = s. co, so(an interjection); coguna, safuna, to scoop out; camela, to rest or lean the head, isi-canelo, a pillow (Nyanja samira, to rest upon, namira, pillow; Tabwa samine, pillow); cootea, to drip (Kongo souse); ewala, to dress the hair (Kongo soun, to comb); neekola, to jest (Kongo sokola):
Zulu: ulu-su: sula; sutu; ewala.
Nlond: ulu-su: sula; sutu; ewala.

qa = s. qaguleka, unguluka, to come to one's senses; qebekula, to dig up, to pee; qocela, suzala, to nig, pinch.

x = s. xola, to be at peace, xwiri, to be quiet or at peace; in-t-xila, dirt, Nlondze i-xgxi.

15. Voiced clicks.

c', c'a, q', q'a, x', x'a = z.

c' = z. isi-cibi, isi-zibi, a patch of cloth; ili-cibi, pond, isi-ziba, pool. (In the former case, the prefix isi- is a locative; in the latter, isi- is a common diminutive prefix; the Old Zulu locative li-, ili is identical with the Beagwe locative-suffix -ra & Santali -ro). Compare further: capuna, safuna, to scoop up in hand; fula; cion, to leak, oore (Herero $\text{w\ddot{a}t\ddot{e}}$); cina, to sprinkle (Tabwa cina); cula, sprinkle (Kongo soun); ulu-Swazi, a Swazi, Nlondze ulu-Owaci.

q' = z. qwi, xwi, one, only one; qaba, zaba, to forbid, prohibit.

x' = z. isi-xula, a kingfisher, u-xongo-xolo, the brown-headed kingfisher.

16. Breathed linguals & velar rr.

rl, l, rr = s.

rl = s. rlwabula, swabula, to chew; aluwama, sinama, to be sore; aluwaka, swakaka, to prepare food; ili-alo, ili-so, ere; am-ileni, same, modesty (Bondei soni, Ganda monzi, Beagwe monzi); alumba, to wash (Nyanja wamba); abu-alalu, bead (Bondei salu, Beagwe u-saro). Transposition occurs in alwasa, swala, to stop up, unless the consonants have the same value.

1- s. *sisitaka, silileka*, to move slowly along: *um-siadaso*, *um-lindasiko*, ~~the~~ the part of a native *iberta* that is opposite the doorway.

rr= s. *rranula, sashuka, rranuka, saduka*, to stretch the legs far apart: *rrameza, tsameza*, to make a sound like that of a bayonet or assegai when thrust into the body: *nrriya, nrriya*, to cluten tightly.

17. Voiced linguals & velar rr.
dal, l', rr' = z.

dh= s. *alinsoka, sindaloka*, to prepare food: *bibidala, bibina*, to slaver at the mouth; see also 6 (8).

14 = s. *tolisela, tozisela*, to bend back, restore.

rr' = s. *rrawula, zawula*, to cut small incisions in the skin.

18. Treatment of the velar gutturals in Shantali, Basque & Zulu.

Velars are not found in all Bantu languages, but their wide range throughout the Bantu area points to their native origin, although the history of the sound-changes, of which they can be proved to be the cause, is still very obscure. Without, in fact, a knowledge of Basque & Polarian philology, their past history could hardly be explained or elucidated: & as they are now so commonly identified with the palatals so far as orthography goes, the differences between the two distinct varieties of gutturals have to be carefully discerned as far as evidence will permit. In the case of Zulu, the difficulty is increased by its fondness for the Hottentot clicks, a peculiarity which is not shared in which by those languages still employ true velars among their alphabetic sounds. These are the back or deeper gutturals formed at the back of the throat, & their origin has to be traced to the old velars of proto-Bantu speech whence they have undoubtedly been derived. If this be admitted as feasible, then proto-Bantu may have possessed as many velars as the parent Indo-Bantu speech, their number corresponding to that of the palatals. They may be represented by the undernoted symbols.

INDO-BANTU GUTTURALS.

Indo-Bantu palatals...

	k, ka, g, ga, q, y. (nasal) ŋ
" palato-velars.	g, gi, z, zh, sh, zh.
" velars. . .	q, qh, g, gh, x, y. " ŋ
" labio-velars.	qu, qhv, gu, ghv, xv, yv. " m

19. If we agree that these velars existed in the past, as some of them do now, a special class of sound-shifts in Zulu, Basque & Santali or between any of these becomes easier to explain. Owing to the place of their formation at the back of the throat, they shifted about in a different manner from the palatals, or front sounds, because they were affected by the back teeth, as shown by their complete dentalisation under the influence of the dental vowels *a, i*; whereas the palatals, produced farther forward in the mouth, under similar influence pass readily into ~~dental~~ sibilants or palato-sibilants which make use of the front teeth as active agents in their production.

It has often been noticed by Santa Linguists that in some dialects labial consonants are employed where in others only gutturals appear. This is also true of Zulu, Basque & Santali, & may be explained by the fact that a slight *y*-sound was naturally developed after the velar, so that in such cases, the pure velars *q, g*, etc., were pronounced *qy, gy*, etc., which are labio-velars. And where labialisation is complete, no trace of the velar remains. Thus, a velar guttural may appear in the form of a dental, a labial, or, if nasalised, the labio-velar nasal *m*. That the original *w* or *u*-sound was a weak sound is quite clear, ^{for} it never takes a strong position when combined with the velars. Indeed, the velar may remain constant in spite of this parasitic sound, although if it is unaffected in one dialect, another will show a contrary development. But after labialisation, it always happens that the velars pass into *p, b* and never into *w* or *y*.

Under normal conditions, when velars precede the vowels *e* or *i*, they retain their primitive character; when before *u*, it is probable that the vowel is occasionally by their labialisation; before the dental consonants *c, t* (light or heavy), they are transmitted to dentals by assimilating ^{their} dental character. From these very brief remarks, it will, accordingly, be gathered that these permutations are characteristic of the back gutturals or velars, & it is the sound-shifts which most readily betray their presence. It has been already proved that the interchanges *k, g, q, g, etc.*, belong to the palatal series; & it remains to prove that the interchanges *k, t, p, g, d, b, etc.*, belong to the velar series.

30. Law of the Velar.

Before palato-dental sonants, all velar sounds may be dentalized; before labial they are labialized.

Exo. Where assimilation is incomplete, the velars remain constant.

31. Dentalization in Santali.

q = t. tsoekok', tsoekot', lean, associated; tsek're, tset're, snouters; lokao, lotao, to lie in wait; jak', tot', heavy, difficult; koeke, basti, stale, rusty; jote, to touch; narvak', narvat', gills of fish; mautu, mauts, to kill; tayan crocodile (Zulu in-gwanya), to cut in big beautiful (Zulu gwanya); ti, hand, (cf. Mandari tidi, Gadeba titi, Ainu tek; all from Idh. *qeyq, the hand doubled up, *quq, to bend, to double the whence Zulu is-andala, hand, fr. O.Zulu *ya'nyā). Other Santal derivatives from ti, hand, are tiak', to lead by the hand; tukua', hodge with the hand; tae-grao, strike with the fist; tshuri, a finger-ring (Ainu tek-orui-kame); tocep', manifold, to sweep (Ainu tek-kara); tian, tich', stretch out the hand. From these words, it is obvious that Santali ti, hand, is contracted from *tiqi, complete dentalization being apparent in Gadeba titi.

This old form runs through the Dravidian languages as kei, but in the Uruan dialect it is khekha, a dissyllabic form which stands isolated & may probably be an old loan-word from the Asur Vols. In any case, there is no doubt that the initial consonant was originally a velar guttural, viz., khekha = Tolarian tiki, titi, ti. This is an important point to consider, as the identity between Santali ti, Ainu tek, Zulu is-andala, hand, can only be admitted if the Santal dental is the velar q before a or i. In this case it is i, or heavy i, which was suffixed to the root *quq-, to bend, - whence *quq-i-a, "it-that-is-bent", then *qigq-a, *qeyq-a.

This Indo-Bantu type is probably also the primitive Indonesian form of over 80,000 years ago, as the Santal & Ainu forms of the root can be traced through hundreds of aboriginal dialects of the Tibeto-Burman, Indo-Chinese & Indonesian families.

q = g. In a few cases, the breathless velar may be voiced to g, the change being usually traceable to vowel-diphthongization behind it. The reverse process takes place with a voiced velar. qhari, tari, to hurry; bag, bast, anura, portion.

q = nd. If the hard t be softened to d owing to the presence of the nasal, the permutation is from k to nd. boka, bonde, foolish; mukui, mander, a headman; bilat, bilend, a plain; antel, bande, fat.

qh = th. arka, andae, to deceive (Beco. ingan, deceit, Zulu aa-anga); mutani, mundini, peak, summit (Beco. wero, back, bill, point); tsee-ri, one-eyed, blind of an eye (fr. *qhez-ri), Zulu iti-side, for -gide, blind of an eye; kumbair, tumbase, to settle down, remain, be firm, (= *qham-); whence Zulu ema, ma, to stand, fr. *yeima; compare Meinof's approximation *yi-ma. In this last example, the question whether the sound in Zulu should be velar g or the fricative velar x depends on the value we attach to the Santal k which represents Indo-Bantu q when it interchanges with t, but q when it is with th. Here its true value is q; hence Zulu ema, ma, comes from the Old Zulu type *yeima (g, 30).

33. Voiced velars.

g = d. laḡak', laḡak', to shut; ḡenthe, ḡhenthe, a knot; ḡhso, ḡao, chance.

gh = dh. ḡamurokot, ḡamurokot, labour, toil; ḡntse, ḡntse, to chide, rebuke.

34. Where the root-vowel is obviously diphthongised, the voiced velars may be hardened.

g = q. ḡsole, ḡson, for 'ḡsole, the "biter" from ḡer, to bite (Ido. 'ḡel, devour; 'ḡer, bite); cf. Zulu 'hula, to devour (Old Zulu 'χula), whence isi-hula, ili-hulu-be, a voracious person or animal.

gh = q(h). ḡoot, ḡoots, a fisherman; beside hako, fish (-Kurku haku, Korma hakuku). The initial Indo-Bantu sound was ḡh - (*ḡhey-q-, fish, whence Bantu 'qivɪ). In Taiheto-Burman & Indo-Chinese this root more commonly appears nasalised as nḡha, fish; but there is no evidence of any initial nasal in Indo-Bantu speech.

The proto-Bantu type, according to Meinhof, is 'kuf, whence Swah. nswɪ, Dulla sue, etc. The initial nasal is derived from the prefix but the Indo-Bantu velar requires q in Bantu according to phonetic law.

34. Dentalisation in Baka.

q = t. berrḡam, verrḡata, heedful; kigula, tḡgula, onion; onḡaker, onḡeter, thunder.

qh = th. nokḡm, a stain, netḡ, to stain.

g = d. ḡgor, ḡdor, dry; ḡdame, ḡdende, a peal of bells; ḡgintse, ḡdintse, to promise; ḡginder, ḡginder, frank; ḡgundereder, ḡgundereder, vessel (lit. the "pretty lady"); ḡgurti, ḡgurti, all; ḡguri, ḡguri, disquieted.

gh = dh. (Menting).

35. Dentalisation in Zulu.

EXPLOSIVE.
q = t. nḡm-sela, nḡm-sela, to go along with the clothes flyer about the person; kḡm, tḡm, to fall drooping over; ḡm-tung, to smoke, in-tung, smoke; un-timba, a bridal party, Hlonipa un-timba: tḡm, tḡm, to love, Hlonipa kḡm.

qh = th. (Identified with k, t). Tḡm, to love = Hlonipa kḡm, for 'qhaza.

g = d. ḡm-sela, ḡm-sela, to laugh ḡm-gi; un-ḡmbele-sela, un-ḡmbele-sela, a sleek & handsome man; ḡm, to relate an affair, isi-ḡm, a serious affair (with augmentative prefix ḡm- as in Ganda), in-ḡm, an ordinary affair (Ganda ki-ḡmbo); isi-ḡm, isi-ḡm, a ear or shelter; ḡm, ḡm, to lay a floor; ḡm, ḡm, to trudge along; ḡm, ḡm, I; ḡm, ḡm, to tramp; ḡm, ḡm, to sprawl or fall in a heap; ḡm, ḡm, to make fast or tight.

gh = d(h). (Voiced ḡh is a lost sound, & is now identified with g, or any of the clicks c', c'h, q', q'h, x', x'h).

36. PRICATIVES.

χ = θ. jundu-beza, tundu-beza, to make blunt (qunda, to blunt); ili-jube, pigeon, ḡmbe -tḡm; un-ḡmbe, un-ḡmbe, a very steep slope; ḡmbe, ḡmbe, to tear off easily.

x' = ǀ.
x'h = ǀ(h).
xona, xonadova, to mix up, knead; xingxela, to make turbid; xum, xuma, to disturb, stir up; xubana, Hlon. dibana, mix together.
xamxalaza, xamxalawa, dangalaza, to stand with the legs wide apart.

Then post-sonic & after the nasal, the click x may have the value of Idh. qa, which becomes in on dentalization: e.g., loka, lewama, lontoa, to snore faintly, from Idh. *leyq-, to snore. This, in Old Zulu would produce the root *loy-, but *lonqh- was assimilated. That is, the modern k in the word loka stands for the obsolete velar fricative, which, according to the Law of the nasal, passes into ngh, now represented by nx, nt, the click x doing duty for the obsolete velar aspirate qa.

FORMATION OF VOWEL-COMBINATIONS BY i.

The number of Indo-Bantu diphthongs probably did not exceed those of modern Basque, viz., the twelve simple diphthongs formed from the simple vowels by i and u. It will be noted that i & u are the basis of all vowel-combinations, because in the articulation of such sounds as ai, ou, oi, etc., the first is sonant whereas the second is consonantal in character & function. Thus, ai is the vowel a + i-consonantal(=i), & ou is the vowel a + u-consonantal(=u). On the other hand, if consonantal i and u precede the sonant, we obtain the combinations ya(=ia), ye(=ie), yi(=ii), yo, yu; and wa(=ua), we, wi, wo, wu.

Diphthongs are commonest in Santali; in Zulu they have practically disappeared. Those of the former are ai, ei, oi, oi, oi; ae, oe, oe; eo, eo, ge; au, eu, ou; iu, ua. Triphthongs are less numerous but very often their presence is disguised in Basque & Santali by the introduction of h or y between vowels, its sole purpose being to prevent hiatus or their coalescence. But in such combinations, this intercalary sound really performs the function of consonantal i; hence its euphonic origin & purpose are very often a matter of dispute.

By combining i & u with the sonants, we obtain the following series of Indo-Bantu diphthongs:-

With <u>i</u> ...	ai, ei, oi, ai, ei, oi.
With <u>u</u> ...	au, eu, ou, uai, uei, uoi.

30. Formation of Zulu diphthongs with \hat{i} .
$$ai, ei, oi = e.$$

- $ai=e$. en-tabeni, at the mill; for en-tab- $\hat{a}i$ -ni.
 $ei=e$. eli-zweni, in the country; for eli-zw- $\hat{a}i$ -ni.
 $oi=e$. ezin-komeni, at the cattle; for -kom- $\hat{a}i$ -ni.

$$ii=\hat{i}(\text{heavy } i).$$

- $ii=\hat{i}$. emu-tini, at the tree; for -t- $\hat{a}i$ -ni.

$$ui=wi(\text{then } i).$$

- $ui=wi, \hat{i}$. e-bantwini, at the men; for -bant- $\hat{a}i$ -ni.

Formation of Zulu triphthongs with \hat{i} .
$$aia, eia, ia, oia, uia = \bar{a}.$$

- $aia = \bar{a}$. um-fulana, rivulet; for -ful- $\hat{a}i$ -ana.
 $eia = \bar{a}$. um-selana, a small ditch; for -sel- $\hat{a}i$ -ana.
 $ia = \bar{a}$. in-buzana, a kid; for -buz- $\hat{a}i$ -ana.
 $oia = \bar{a}$. um-fana, a boy; for -fo- $\hat{a}i$ -ana.
 $uia = \bar{a}$. um-atwana, child; for -u- $\hat{a}i$ -ana.

三、

LABIALISATION BY W or U-CONSONANTAL.

1. There are in Zulu three varieties of w, according as it is a semi-vowel, & a breathed or voiced labial fricative. The breathed sound is that of w in English 'water'; the voiced variety is more difficult to describe as it is intermediate between b and v, & in Nantu dialects this may appear as b, v, w, bv, wh, y. In Zulu, it appears as w, b, v, the b-sound being obviously not an explosive in origin but the Zulu approximation to the pure labial aspirant which we render by the symbol β . The other is the vowel u turned consonant(=u), which may precede or follow a sonant in the same syllable. Hence are obtained the vowel-combinations wa, we, wi, wo, wu: and au(=o), eu(=o), uu(=û), ou(=o, u), iu(=yu).

The labio-dentals f, v, are pronounced as in English, & seem to be in origin the stronger varieties of w, u which are weak spirants (breathed & voiced). Their dental character is, doubtless, owing to the influence of neighbouring dental sonants, s or t, although these may not be now evident. In Ainu, Santali, & Basque, labio-dentals either do not exist or else occur only in words of foreign origin (e.g. Ainu & Basque); hence they cannot be accorded any place in the parent Indo-Bantu alphabet. For a like reason, whether they cannot be regarded as ancient Zulu sounds, ~~whether~~ ^{whether} ~~whether~~ proto-Zulu (Asiatic) or Old Zulu (North African); even in modern Zulu they are not primary sounds, for in the majority of cases f & v represent labialised consonants which have been assimilated by w and u.

2. It was previously mentioned that in addition to the velars, there was a closely related series of gutturals known as the labio-velars, or velars which were articulated with a slight labial affection caused by the presence of a parasitic u-sound. Owing to the weak character of w or y, which might either be sonant or consonant, their permutations are largely determined by the individuality of y asserting itself. If it be quiescent, the velars remain constant & show no trace of labialisation; otherwise, their assimilation may be so complete that no trace of a guttural is left. But as they appear, then, as p, pa, b, ba, & never w, u,

the weakness of this η -sound which originates these phonetic changes, is patent enough. Again, the proximity of a velar to the nasal alters it to η , which becomes \tilde{m} after assimilation of the velar is complete. Thus, the consonant m in Santali, Bhasia & Zulu is a triple combination, the corresponding aspirated form being a quadruple sound, viz., $\tilde{m}h$. These are called labio-velar-nasals & are everywhere confused with the labial m , except in a few of the more archaic Bantu dialects.

3. Before labials n passes regularly into m ; but when we discover gutturals like k & g interchanging freely with m , the nasal must then be regarded as the labio-velar variety, which we shall render by the symbol \tilde{m} . Compare the following ^{Santali} examples:

$\tilde{m} = m$. *chanke, chanke, to lie in wait (Zulu qamekelela): jian, jiam, the tailor-bird: loyon, loyom, toad-stool: damra, damra, bullock: chamki, cow-tick (=Zulu -qashi): chenderi, chenderi, bare: laŋgat, lamta, lamta, naked.*

$\tilde{n} = m$. *unjan, umja, to be jubilant: leŋer, liam, smooth, slippery (=Baq. legon, leun): sun, sum, sumba, sund, pit, mine, quarry.*

Santali \tilde{h} appears frequently in the dialects as \tilde{n} , without trace of labialisation; & vice versa.

Sant. bulan, salt, Kuri bulum.
" mayam, blood, Mundari myuk.
Kuri puluk, white, Kuri pulum.

$q = \tilde{h}$. *abuk, abuh, to wash the hands: luhuk, luhuh, to treat: mak, mah, mahg, to cut: silup, sih, to shut, close.*

4. The labio-velar-nasal \tilde{h} & its sonant form \tilde{h} belong to the obsolete sounds of Zulu, & their history can be traced only by means of their sound-shiftings. In origin it is the same as the labio-velar-nasal \tilde{h} & its sonant \tilde{h} , the former being \tilde{h} , \tilde{h} under the influence of neighbouring labials. The Santal intensive or augmentative particle $-h-$ is the same velar which occurs in the Zulu words *ah-gosa*, intense heat (fr. *ili-kosa*, heat, & the intensive particle \tilde{h}): *is-ah-gci*, dense continuous rain (fr. \tilde{h} + *ci*, to be soaking wet): *is-ah-kahlu*, violence (fr. *kahlu*, to speak wildly): *fici-ŋg-a*, to squeeze with all one's might; fr. *fici*, to squeeze; *sama-ŋg-a*, to tie very tight.

Before dentals & labials, its velar character is entirely lost, as in *an-da*, to increase, grow intensively (=Baq. *andi*, great): *m-bongoza*, to cry out loudly, from *bonga*, to shout, praise; *vata*, to dress, *am-bata*, or *am-bhata*, to put on clothes ($-h-vata$), *ŋgi, ndi*, \tilde{h} .

mi-na, I myself; mfangusa, mfangusa, to have to do with anything
 tant is very porous or soft; mangua, amula, to dry on the sur-
 :face; nangasa, nangasa, nangusa, to act ferociously; un-nini,
 owner, master(=Sant. ninjam), Nyanja mwini, Swah. mwenyezi; Basque
 nagusi, master; pa, to give, pa-na, to be liberal; ukuti tu, to
 come out, emerge, na-tu, to dip out largely, take out deeply;
 mbe, to be thoroughly firm, positive, fast (an intensive root).

5. Labio-velars in Santali.

- qu=p. Hihiri-Pipiri, Paradise; kalo-belo, intoxicated.
 qh_u=ph. kaat-poti, to quarrel; khad-bad, miry.
 gu=b. ladgur, ladbur, bend down, hanging down; lagech', labak',
 fresh, green; gudi, bundis, think; gusti, box, family, see.
 gh_u=bh. tigai, tibai, a prop; gauri, bar, time; guorna, berna,
 a fence; heje-beje, irregularly; guargurao, baerbuerao,
 to revolve.

6. Labio-velars in Basque.

- qu=p. ausko, aspo, lungs.
 qh_u=ph. (Wanting).
 gu=b. garbentzu, barbentzu, chickpeas; gudi, burdi, ear;
 gurusoak, burnasoak, parents; nagusi, nabusi, master.
 gh_u=bh. (Wanting).

7. Nasalisation of the labio-velars.

SANTALI.

- qu=ñ. kana, mena, to be; korech', motech', to be diligent;
 ken-men, to quarrel; keō-meō, to mow; ~~kanar, menar, to~~
~~kanar, menar, to~~ monre, mōre, mone, 5(=Basq. bortz),
 from Id. *penqe, five, by labialisation from Id. *quenqe,
 five, which is the nasalised form of the word for "hand".

Here might also be added the name Kherwar, the
 Santal term denoting the Kolarian race. The suffix -war
 denotes the person or agent; hence the root is Khēr or
 *Qhēr. In its nasalised form, it may be related to that
 of the Khmer, or Mōñ-Khmer of Indo-China; or, at least,
 the derivation of both is the same, viz., from the word
 for "black"(Id. *qēr-, *qwēr-, *her-, black, Basq. beltz).

- qh_u=ñh. khunju, munju, to be vexed; khun, mayan, bleed, to bleed;
 khenjer, menjer, to cut into small pieces.
 gu=ñ. gur, mor, to fall, die; ganac, manac, to honour.
 gh_u=ñh. hisit', misit', gently; hur-mur, quickly; lauk', lauk,
 to gash, cut deeply; ghēj, mēj, to mix, confuse.

8. Before dental sonants.

- q_v = h. torlo, morlo, to appear regard: tens, mens, to delay.
 g_v = h. gund, bundis, guman, to ponder, reflect.
 qh_v = hh. thocho, motao, to wrestle.
 gh_v = hh. dolo molo, sed: dandaa, mandaa, ambiguously.

9. Nasalisation of the labio-velars in Basque.

- q_v = h. bitika, bitika, a kid (a diminutive of 'biti-, goat: Sant. boda, Zulu -buzi);
 g_v = h. legami, lemani, yesut; bil-gor, mil-gor, svet (a reduplicated root).
 qh_v = hh. phulo, pulo, mulo, a heap, pile: ipini, ifini (= 'ipaini), imini, to set, put: um, fun (= 'pam), muu, muin, narrow.
 (gh_v = hh). [Care!]

10. History of the Labio-velars in modern Zulu.

A. Without nasalisation.

- q_v = p. kafuka, rafuka, to be poured out: kanga, pagala, to rub off with the hand; kofuza, pofuza, to grind coarsely; tsokoza, tanopeza, discharge, eject, vomit.
 q_vt = p. twanyaza, paayaza, to gaze at with shifty looks; jwatumo, jwapuma, to vary slightly; tantzu, pantsu, give anyone a swipe: twiqila, pwiqila, to snar, crack: pupuma, overflow, Herero pupisa, overflow, Swan. tutuma, bubble up.
 g_v = b. gonula, bonula, to break off: gwagweda, gwabeda, to scrape out: gwavumula, bawumula, growl: ili-alingulu, ili-imbulu, a crow (= Swan. kunguru); gwaxula, (baxula), baxabula, to strike (as with a sjambok); ukuti gidali, -bidali, to strew, scatter.

When there is only a rounding of the lips so that labialisation of the velar is incomplete, we find gw in Zulu, the guttural being rarely dropped. Compare:

gwintsa, gintsa, to swallow: gaba, a part, gwaba, to take a portion: ili-gence, ili-gwenge, a deceitful person; ~~isi-genge, isi-gwenge~~ and isi-gedale, isi-wale, a stoney place: gadaleza, waleza, to rattle; wa, to fall, Ganda, Bondai, Nyanja gwa.

- g_v, d = b. dalakama, balakama, to fling in a sprawling fashion: in-dakandam, in-baxambaxa, a person or thing bedraggled with mud.

11. Fricative labio-velars.

- χ_v = p. hafuka, rafuka, to be poured out; um-maa, um-ranga, the name of a bush-fern (encepsclartos sp.); wafuka, rafuka, to grind coarsely.

With the lip-rounding the labialisation is incomplete.

- χ_v = w. ili-huma, -huwa, an overpowering passion: hahaze, haza, hwaheza, to make a hissing noise; haaha, hwaaha, to rustle: hanga, wanga, surround: hushuka, wushuka, to slip out, escape.

ɣ, z = b. maka, to get stuck across or crosswise, masulula, to pull asunder things joined or crossed together, ili-masiyo, ili-mabiyo, a forked or crossed stick.

12. Clicks as Labio-velars.

Breathed labio-velars.

c = p. cwazima, vezima, to wink, blink; cicima, pupuma, overflow.

q = f. qwayiza, payiza, to move the eyes shiftily; qwa, pā, to be very white; qukula, rukula, to pout the lips; ua-qobo, ua-pobo, an unripe fig; ulu-qenyane, -pennyane, a fowl's disease; isi-ngutu, ili-pundu, occiput; ukuti qungqalazi, pagalaka, to come into sight.

x = p. xuku-zela, xapa-zela, to rumble (as the stomach).

Voiced labio-velars.

o' = b. ulu-cosela, in-boxela, an ox with erect sharply-pointed horns; vasula, vambula, alep, strike; cwazi-mulo, to gleam, glitter (whence ulu-cwazi, a dazzling glare; u-cwazi-bo, Aldebaran), beza, to gleam, glitter (whence ubu-moko-bezi, a head-ornament made of the bush of a cow's tail, but originally a precious stone or glittering ornament of any kind that was worn on the head). Cf. Hlonipa u-coca, ncamaza, ili-cantsai, ~~ulu-cantsai~~ Zulu babu, babaza, bantshi, qasazela, qubuzela, to salver with cold; qanda, banda, to be very cold.

x' = b. isi-gwa, i-abho, an iron rod or wooden stake used by the witch-doctors; ili-bhotwe-Hlonipa ili-khotwe.

13. Linguals as Labio-velars.

Unvoiced labio-velars.

hl = p. hlikeza, hlefeza, peheza, to split, break; alialima, cicima, pupuma, to overflow.

dh = p. dhunge, punge, to talk wildly; ili-dalungandhlebe, ili-pungandhlebe, a headstrong, self-willed person.

Voiced labio-velars.

a'l = b. mahlaza, mubuze, to bang, thump; alakanipa, to be clever, smart, Hlonipa bekanipa.

dh = b. bidaliza, bializa, bibiza, to cause to fall to pieces.

l' = b. ili-bikibiki, ili-likiliki, anything of a soft & snaky nature; biki-zela, liki-zela, to shake like a jelly.

14. Labio-dentalization may be said to represent a further step in the treatment of the labio-velars which Bantu speech has ^{well} fairly developed, whereas in the other groups it is unknown. Its origin seems to be due to the influence of dental sonants affecting the labial after the labio-velar had been completely assimilated. That is to say, f & v are labial fricatives with a dental affection which is primarily traceable to the palato-dental vowels e or i.

Labialisation by u before the dental sonants.

Breathed explosives.

$\text{K, T, P} = \text{F.}$

- u-f. u-nkulu, u-nkulu, the month beginning about mid-Sept.: ember; ulu-kulo, ulu-kulo, the left side; kudumisa, kudumisa, to become warm or sultry; ulu-kulu, ulu-kulu, ill-health: -kazi, female (a suffix of feminine nouns), um-kazi, woman; ukhessa, ukhessa, to split in two; ka, to die (Makua kus, Kamba khwa); isi-fuba, breast (Nyanzezi kai-khuya); -futi, short (Makua kufu); -fudu, tortoise (Soto khulu, Bondel kuvu); ama-futa, fat (Konde ma-khura).
- t-f. natuna, natuna, to be sticky; funa, to wish (Makua tuma); Edh, tuma, tuma, funds, to teach (Pedi rut'a); fuya, to own, possess (Pedi rus); ili-fu, cloud (Pedi le-ru).
- p-f. panlaza, panlaza, to smatter; potoza, potoza, to press or dimple in; capuna, zafuna, to scoop up in handfuls; potoza, potoza, to bend, bow.

Voiced explosives.

$\text{G, D, B} = \text{V.}$

- g-v. gonzo-bala, vongo-bala, to be shrivelled up; umu-vi, fly, hornet (Herero vi-isi, a fly, Swah. nzi); isi-juqu, isi-vunku, a piece, portion; in-vubu, hippopotamus (Kongo nguva, Duala ngubu); i-avu, snail (Baranga gwai, Vende ngu).
- d-v. daba, to fish (Ganda vuba, to catch fish); vuma, to sing, accompany with chorus or song (Duala duma, to murmur); (In the Swazi dialect, d or dv may appear for v where Zulu has d or v ; cf. Zulu -duma, male, in-doda, man, Swazi dfuna, male, dvodsa, man).
- b-v. jibaza, jivaza, to revile; labuza, havuza, to make a sipping noise; yobula, lovula, to reel off; biba, wava, to quiver, vibrate rapidly.

Breathed Fricatives.

$\text{H(X), S, W} = \text{F.}$

- X=f. hamba, Nyanja famba, to go.
- s=f. isi-su, belly, Bondel i-fa; ubu-suku, night, Kwanyama ou-fiku; ili-echo, a stone of the fire-place, Shambela i-fyo; um-sira, vein, Kwanyama ou-fipa; u-singa, tendon, Kwanyama ou-fenza; ocololo, cofeza, to crush, squash.
- w=f. fa, to die, Yao wa:

VOICED FRICATIVES.

$\text{Y}(\gamma), \text{Z}, \beta(\psi) = \text{V.}$

- Y-v. congobala, nongobala, vongobala, to draw up the limbs into a contracted posture.
- j=v. isi-juqu, isi-vuqu, piece, portion; ili-jengezi, ili-vengezi, mucilaginous evacuation of an infant or calf.
- z=v. zakeza, vakaza, to be dotted or spotted; vata, to dress, Tonga zuata; zala, to begot, Bondel vuala, Angola vuata; ili-zwa, country, Swazi ili-ve; ili-zweti, fire-stick, Natal dialect ili-vezi.
- u/v=v. lawula, levuza, to gossip; ili-vinkili, from Dutch winkel a shop; nyevu-za, to backbite, in-yev-u, backbiting, in-yewo (= yev-u), habit of backbiting; viva, to collect, -vipo (= viv-jo), assembly, group.
(From these last two examples it will be noted that the change of v to w or y depends on the following u or i).

16. Breathed Glides & Linguals.
C, Q, X, HL or DHL = F.
- c=f. zacuna, zafuna, to scoop up in handfuls.
Zulu: fakaza, feketa, fisa, funda, fupi, fuya, ili-fu, in-fen.
Hlon: cakaza, ceketa, cisa, cunda, cuni, cuna, ili-cu, in-cend.
- q=f. hangaza, hangazax namfusa, to become wild or ferocious.
- x=f. (Not ascertained). Cf. kova, knend, & alofoza, fonloza, to smash.
- hle=f. hlofena, alokeza, kefeza, fonleza, to break in two, split;
hlofaza, fanlaza, to make a start: ama-alifilifi, ama-
:fialifilili, things lying about; hlikila, Swai. filione,
to rub; pauluka, pafuka, to blurt out thoughtlessly.
- ahle=f. dalovoza, alofoza, fonloza, to smash.

- Voiced Glides & Linguals.
C', Q', X', DHL = V.
- c'=v. ili-cu-kazi, ili-xu-kazi, a ewe (Fem. of in-vu, sheep):
cf. Karanga gwai, Venda ngu, a snasp.
Zulu: vasa, veza, in-vuba, vusa, vunda, vutha, in-vuzi.
Hlon: vcome, vceza, in-cubu, cuma, cunda, ncutha, in-ncuzi.
- q'=v. qubukula, vubukulu, to discover, apparently an extended
form of vula, to open (Bondei vugula, Shambala zugula,
Yao ngula).
- x'=v. xuba, vuba, to jumble or mix together; in-vu, sheep,
ili-xu-kazi, a ewe; vubula, to mix up, Hlonipa kubula.
(As the permutation between x and b is more frequent
than that between x & v, it is possible that the former
is the pure bi-labial spirant β , & that labio-dentalism
of the original labio-velar was rare.)
- dhl=v. (This type of interchange is not found in Zulu, probably
owing to the fact that when labialised it passes into β ,
but otherwise remains constant.

17. HISTORY OF THE LABIO-VELAR NASAL IN ZULU.

Velars q, qh, g, sh, x, y, x', y', = m, mh.

- q = m. naha, nanza (=nah-za), to care or bother about; u-nahaka,
u-nahulu, mid-September, hahfu, fahfu, to sprout anew,
to begin to appear or come forth.
- g = m. in-zanzane, in-zanzambu, an old tottering person (from
zanz-zela, to totter); nangula, nahula, to dry on the
surface; ngi, ndi, I, mi-na, I myself; u-hoya, air, wind,
(Duala ngo, Karanga mgeya). Cf. Zulu u-moya, gongo, un-
:go-gongo, the black-headed oriole; ka-ngaka, so very,
so very, Hlonipa ka-maka; in-gane, infant, Hlonipa i-gane
(Karanga mgeya): ngaka, of such a size or quantity, so
large, so much, Hlon. masha; um-gongo, sorcerer, Hlonipa
~~um-gongo~~ un-moma;
- Xx = m. isi-wukulu, isi-lungulu, a dumb person; wata, dota,
h=m. to take a small drink; ukuti in, -rru, -tu, -du,
rr=m. to form a long line, row or file.
t = m. shuteka, shumeke, to slip a thing under something else.
p = m. ili-puzu, ili-luzu, ili-pauzu, ili-luzu, knot, pretcher-
:ance;
ph=mh.
- y = m. gojela, gonela, a long tail-feather.
- zh=m. zita, to be pregnant (Swai. sidi, to swell, zito, heavy
with child, pregnant).

ai=h. tshongolo-zela, hinyale-zela, to empty out entirely.

ai=h. ili-hluzu, ili-muzu, a knot on a tree; ili-hlo, eye (=Sant. met', eye, from Idib. root 'he-, to see; whence also Basq. be-ti, eye); Eulu hlangu, five (=Sant. Monre, Basq. bortz, Idib. 'quchge, five, " a doubled up fist); alunga, to cleanse (=Sant. Mah'jao); alukana, to separate (=Sant. amik); alaba, aloe (=Sant. moreba).

b = h. bozo-zela, momo-zela, to smile.

ba=ha. uruti moncu, -moncu, to draw out anything smoothly.

CLICKS.

c = h. vacula, vambula, to scoop out deeply; uruti nnoi, -nu, to close tightly; in-cikiciki, i-minicimici, any slippery or glossy thing;
Zulu: mangala, mema: mnyana.
Hlon: cangala; ceca: cinana.

q = h. ili-quzu, ili-muzu, a knot in a tree.

x = h. in-gkotha, a heavy brass plate worn round the lower arm, Hlonia i-metha;
Zulu: is-akhane; jaba; njalo, thus, so.
Hlon: is-axilana; gamba, haba; ngxalo, holo.

These consonantal combinations in Zulu by i- and u- consonantal represent the most difficult and complex of all the Indo-Bantu sound-shiftings; and as they are now far more evident in the Bantu group which has developed the palatalisation and labialisation of sounds to an extent unknown in the Basque or Polaroid groups, so that they entirely obscure from view the real character of primitive sonants and consonants, it has been considered necessary here to illustrate at some length the various modifications ^{to} which every class of sound is subjected by the ~~influence~~ influence of neighbouring sounds, especially i and u, & their combination with the palato-dental vowels or the nasal. By means of these sound-changes it has also been indicated that Zulu in reality possess a greater variety of gutturals than would appear from its alphabet, many of them being disguised as clicks & linguals, both breathed & voiced, aspirated & unaspirated. From the evidence of these sound-shiftings, therefore, we are obliged to infer that Zulu, as a leading type of Bantu speech, points indubitably to some earlier form of the language (which we have named Old Zulu) which was richer in alphabetic sounds, each of which, presumably, had an independent value. Covered with Santals, in Zulu the loss of many primitive sounds is only too apparent; on the other hand, they can still be traced by their sound-shiftings.

LAW OF THE NASAL.

1. It is characteristic of Zulu as of all other Bantu dialects that nasals readily attach themselves to consonants. They seem to be an aid to correct articulation although they are extraneous to the root-words. In some dialects like Ronga & Pipe, the nasal sound becomes, in fact, so strong as to cause eclipsing of the consonant; e.g. Zulu *umun-tu*, man, Ronga *mu-tu*. The importance of the nasal in the development of Bantu speech cannot be doubted, & its purpose is twofold. It strengthens or preserves weak sounds which would be lost, & weakens strong sounds to maintain the balance between the weak or breathless class of consonants and the corresponding strong or voiced. Thus, the dual function of the nasal in Zulu is to preserve the relative stability of Indo-Bantu sounds, and to modify those sounds according to a fixed principle which still maintains their stability. From this it will easily be understood that every nasalised consonant in a Zulu root-word is a modified sound, whose true value is determined by the phonetic permutations caused by the use of the nasal.

2. These permutations which affect the three classes of the Indo-Bantu consonantal system, stops, aspirates & spirants, may be briefly illustrated from a couple of Bantu dialects, to show that they are not confined to Zulu alone.

Stops pass into Spirants.

This type of sound-shifting is general throughout the Bantu area but is not always to be traced to the influence of the nasal. In the Kamba dialect, however, the stops become ~~nasals~~ spirants when the nasal affects them; e.g. *u-tuka*, night, plur. *nzuka*; & in Farenge the voiced stops *g, d, b* in adjectives of the 4th & 5th classes pass into *n, n, m*, respectively. Thus, *-guru*, great, *-gobvu*, thick, stout, become *-nuru*, & *-nobvu*; *-dema*, black, *-deta*, thin, become *-nema*, *-nete*; and *-bemi*, wide, *-banyu*, alive, pass into *-nemi*, *-mnyu*.

Similarly, in the Bango dialect the breathless stops *k, t, p* become *n, n, n*, owing to the influence of the nasal (cf. Meinhof's *Lehrbuch der Bantusprachen*, p. 198). In these cases, the change of *d* to *n*, & *b* to *m* is caused by the vocalisation of the voiced spirants which are then eclipsed by the dental or labial nasal (e.g., *n(ny)* = *n+b*, *n(nz)* = *n+d*, *n(ny)* = *n+g*).

3. Aspirates pass into Stops.

This type of sound-shifting is perhaps more easily shown from Zulu than any other Bantu dialect but Swahili may be taken here to illustrate the interchange between aspirates and stops. In this East African language it will be found that the aspirates *kh, th, ph*, regularly appear as *nk, nt, mp* when the nasal is used (cf. Meinert's *Lautlehre* etc., p. 90). That is to say, the aspirates without the nasal pass into the corresponding stops with the nasal; therefore, *kh-akh, th-ant, ph-amp*; *kh-ang, th-and, ph-amb*. Thus, Swahili *khana*, arab Zulu *i-akhala*; *thata*, 3, *ntata*; *phaka*, eat, Zulu *i-mpaka*.

4. Spirants pass into Aspirates.

The third series of permutations may be shown from the language of the Basuto which is a close neighbour of Zulu. It is a rule in Suto that the breathed spirants *h, r* (^{often} by rhotacism for *s*), *f*, pass into the corresponding aspirates whenever the nasal operates under the following conditions :-

- (1). After the prefixed objective pronoun of the 1st person singular (*n* or *na*).
- (2). After the reflexive pronoun *i* (the so-called reflexed voice).
- (3). In nouns, mostly of verbal origin of the 5th class (without prefix), singular & plural, & also in forming the irregular li-plural of some nouns of the 3rd class.
- (4). In the proper adjectives, when in concord with the 5th class singular & plural, & adjectives of the 4th class plural.

"That peculiar strengthening (or permutation)," says M. Jacottet, "is caused certainly by the nasalisation of the initial consonant, which nasalisation is still evident in the case under 1, whilst in the cases under 2, 3, 4, it may ^{be} proved to have been there originally although all vestiges of it have now disappeared". (See Habbille's *Basuto vocabulary*, 1893; *Introductory Grammar*, p. 8). The following are examples quoted from the grammar:-

N = *kh*.

S (or *R*) = *th*.

F (or *P*) = *ph*.
change.

1. Verb-root; *ho kana*, to build; *ho rata*, to love; *ho fapanya*, to A

2. With obj. pronoun *khakhala*; *ua ntata*; *ua mphanyo*.

3. " reflexive pron; *ho i khakhala*; *ho itata*; *ho iphanyo*.

4. Verbal noun (5th Cl.); *khano*; *thato*; *phanyo*.

5. A further development of sound-shifting whereby breathed consonants become voiced & voiced become breathed, might easily be illustrated from Suto, Herero, Duala, Fonde, & many other forms of Bantu speech: but this has been demonstrated by Meinhof, Torrend & other philologists, and its prevalence in Zulu also must, accordingly, be recognised as a variety of sound-change which dates back to the beginnings of Bantu speech. So far as Zulu alone is concerned, the roots of the language are so commonly found both in their unmodified & modified forms, that the Law of the Nasal, as it affects the principal sound-shiftings, can be clearly demonstrated almost without reference to other dialects; & the preceding remarks may, therefore, be taken to imply that this Law is of much wider application in Bantu than it is my intention to demonstrate here.

LAW of the NASAL in ZULU.

ASPIRATES	become	STOPS.
STOPS	become	SPIRANTS.
SPIRANTS	become	ASPIRATES.

Exception: When the sound is post-tonic, original breathed consonants pass into the corresponding voiced consonants & the voiced consonants into the corresponding breathed.

SYNOPTICAL TABLE of SOUNDS ILLUSTRATING the LAW of the NASAL.

O. I. P.			Z. U. L. U.			XOSHA			XULU		
Aspirates.	Stops.	Spirants.	Aspirates.	Stops.	Spirants.	Aspirates.	Stops.	Spirants.	Aspirates.	Stops.	Spirants.
h, t _h , p _h , ...	K, t, p	h, s, w (f)	Kh, th, ph, ...	f, t, p	h, s, w (f)	Kh, th, ph, ...	f, t, p	h, s, w (f)	Kh, th, ph, ...	f, t, p	h, s, w (f)
G _h , d _h , bh	g, d, b	y, z, β (v)	(G _h , d _h), bh	G, d, b	y, z, β (v)	(G _h , d _h), bh	G, d, b	y, z, β (v)	(G _h , d _h), bh	G, d, b	y, z, β (v)
Pre-tonic	Post-tonic	Pre-tonic	Post-tonic	Pre-tonic	Post-tonic	Pre-tonic	Post-tonic	Pre-tonic	Post-tonic	Pre-tonic	Post-tonic
k	g	h(χ)	y(γ)	ka	ga	k	g	h	y	kh(k)	gy(γ)
t	d	s	z	ta	da	t	d	s	z	th(t)	dz(d)
p	b	w	β(v)	pa	ba	p	b	w(f)	β(v)	ph(pf)	bd(bv)
g	k	y	h(χ)	ga	ka	g	k	y	h	g	kh
d	t	z	s	da	ta	d	t	z	s	d	th
b	p	β(v)	w	ba	pa	b	p	β(v)	w(f)	b	ph

HISTORY OF THE NASAL IN ZULU:

I. Pre-tonic.

(a) A. The ASPIRATES.

Ka, Ta, Pa; Ga, Da, Ba = nk, nt, mp; ng, nd, mb.

nk. khatasa, to worry, i-khatazo, a worry; isi-khahlu, violence, isi-ankahlu, intense violence; isi-khumbha, a skin, hide, i-akumbha, a shell.

nt. ili-thendele, i-thendele, partridge; un-thini, i-thini, an otter; nthu, nthu, hare.

mb. mela, to be complete, i-mpela, altogether; ili-phiku, i-mpuku, mouse, rat.

ga =ag. (Voiced ga is obsolete & may now appear as g or a click. Its nasalised form is ng when pre-tonic and nk when post-tonic.)
 ili-gaga, i-nganga-zane, a pole-cat; gale, ga-ngile-za, to pick a quarrel; galeka, ga-nealeka, to feel faint; ama-xodololo, ama-agozololo, frequent pauses or inter-vals; unu-ga, Hlonipa unu-ga, varieties of mimosa bushes; gina, hina, to cut short, u-igini, a person or thing with a limb or member cut off short.

da =ad. (Only d is found; hence the interchange between d,nd).

Faranga dundu, hill, Zulu ili-dundu, top of hill, Herero o-adundu, a low hill; dodoza, ndonda, to breathe with a wheeze; dendisa, ndendisa, to be prelix; doda, to become a man, i-ndoda, male, an adult (Old Z. *dho-); um-dumba, rod of the i-dimba plant, un-ka-ndumba, a stay-at-home, an old womanish man (elibele uruka izindumba nowfazi wake).

ba =ab. (Zulu now makes no distinction between mb & mba, but mb is sometimes assimilated to m, from an earlier intermediate type ma).

bna, mba, to be open or exposed to view; baence, mbance, to twist about; baebe, abebe, to slap; bonga, roar, cry, howl, mbonga, to wail or cry loudly;
 And by assimilation of mb to m, then n, we get :-
 bnacula, moncula, to extract anything that slips or slides out easily; mbangcaza, manaza, to quibble or prevaricate; bnjele-zela, minyele-zela, to empty out entirely.

8. B, S T O P S .

k, t, p; g, d, b = a, z, w(f); y(j), z, β(v).

k = ah. (a before u becomes w; before becomes y; hence nhy=aw; whi=ny when i is sonant, but ntsh(=n+sa) when i is consonantal). Breathed h may also suffer eclipsis.

(1) Zulu k = aw.

ulu-kwilewi, very early dawn, awi, to begin to dawn; kwela, to climb, Hlonipa kwela.

(2) Zulu k = ay.

ulu-kambwa, Hlonipa ulu-ayambwa, a food-pot.

(3) Zulu k = ntsi.

Zulu: kolwa, kuleka, kolwa, isi-kwama.
 Hlonipantsi: ntsi-kuleka; ntsi-kolwa; isi-tshwama (=ntshwama).

(4) Zulu k = ng, na.

Zulu: isi-ntshi, /kononda, um-kovu, um-kuha, um-kumbhi;
 Hloni: isi-nontshi, ncononda, um-novu, um-nouha, um-noumbhi;
 compare also the Hlonipa bi-forms kwa, nowa, to feel, ^

(5) Zulu k = n (for ah by eclipsis).

Zulu: kolwa, kombwa, kuleka, kuluma, u-koko.
 Hloni: nolwa, nombwa, nuleka, nuluma, u-nono.

t = nts, ntsh. When the nasal appears before s, a parasitic t is introduced, the combination nts becoming ntsh before i or the velato-dental vowels. As in Sato, hard r seems to have displaced s before it dropped out of Zulu; hence nr (for ns) became n by eclipsis of the liquid or hard sibilant.

Zulu t = tsh.

- (1) Zulu: tusa, tana, tokoza, un-tendelo.
Hlon: ntshusa, ntshana, ntshokoza, i-ntshongolo.

- (2) Zulu t = n.

toba, to get softened, i-nobanobo, anything of a soft or pliable nature; totoba, nonoba, to go slowly.

Zulu: tokoza, to enjoy; ulu-tango, a wattled fence.

Hlon: ntshokoza; ulu-nango.

p = mw. The combination nw before y is assimilated to m; but into ny before i & the palato-dental vowels.

- (1) Zulu p = m.

isi-pongo, isi-mongo, protuberance of frontal bone in the middle of the forehead; peqoza, mongoza, to snap; pela, to end, finish, Herero mann, Ganda mala;

- (2) Zulu p = ny.

panyeka, to hang up, Herero nyanyeka; i-hyanga, (lector, moon, Hlonipa i-mpangu (-Sant. bogan, moon)).

- g = ny. (1) Zulu g = ny (a before y).

Zulu isi-yodalo, the upper part of a royal kraal, Hlonipa isi-nyodalo.

- (2) Zulu g = nj (n before i).

golo-zela, njolo-zela, to stare at, to gaze fixedly.

- (3) Zulu g = n (with eclipse of i-nascent)

Zulu: isi-jaba, ili-jabam, isi-jere.

Hlon: isi-naba, ili-nabam, isi-nene.

- (4) Zulu g = no (for n velar).

Zulu isi-n, a saying, word, ili-nzi, blood.

Hlonipa isi-nce, " " i-ncontwe, "

d = nz. The combination nz has a history similar to that of ns. The aspirant passed into the soft variety of l fricative, & then nl became n by the vocalisation of the liquid or else by its eclipse. Before y (or i), the voiced dental easily transmutates to j, or ntsa when nasalised.

- (1) Zulu d = ntsa.

Zulu de, le, long, Hlonipa ntsawe.

- (2) Zulu d = n (with eclipse of z or l).

dambuluka, jambuluka, lembuluka, nambuluka, to be stretched out; ulu-dwabu, ulu-awabu (fr. *uzabu), an invalid; dembuzza, nambuzza, to do anything slowly; ulu-dwambu, ulu-awabu, a chameleon; dwabu-zela, awabu-zela, nambu-zela, to go at a snail's pace.

Zulu ulu-daka, mud, Hlon. ulu-nika; Zulu isi-dwaba, petticoat, Hlon. isi-nwayi.

b = ny. The combination of the nasal with voiced y produces m,

which thus becomes a voiced labial fricative nasal, with a history different from the labial nasal m & the labio-velar nasal n. Before i-consonantal, b regularly passes into the fricatives j or ts (Old Zulu zh) as was shown in a previous chapter, whether with or without the nasal. When y is vocalised, eclipse may take place.

Zulu b = m.

- (1) bifele-zela, mifele-zela, to empty out entirely; boncula, moncula, to draw or pull out; bozo-zela, mwama-taka, nama-taka, Hlonipa nama-saka, to smile; bona, to see, Herero muna, Hongo muna.

- (2) Zulu b = n (with eclipse of u).

Zulu bala, to count, bonda, to wash, stir up, bonga, praise.
Hlonipa nala, " nonda, " " nonga, ".

C.

INSPIRANTS.

h, s, w (or f); y (or j), z, β (v) = kh, th, ph; sh, dh, bh.

h=kh.
 χ =hgh.

(The combinations akh, nta, etc., are not permitted in Zulu, their place being mostly taken by stops, or clicks in the case of guttural sounds. The shifting of aspirates to stops in place of the lost aspirates must, however, be dissociated from the primitive shifting of aspirates to stops.)

Zulu h = nkh.

- (1) Suto kama, kama, to snore, Zulu hama, honga (C. Zulu hama-hama, nkhon-nkhon-a); un-ndede, un-ndede, jealousy; namfuza, ngqoka, to attack ferociously; ukuti na, -ake, to be very white.

- (2) Zulu β = nkhi.

Zulu: sala, sanga, sinda, siza, isi-sila, -sebe, ulu-si.
Hlon: nkala, nkanga, nkinda, nkiza, isi-nkila, -nkebe, ulu-nki.

Where the initial palatal spirant was vocalised before nasalisation affected it, or if its character as a vowel or consonant was not clearly marked, this breathed h (or hard y) passed into w when followed by u, & y when followed by the palato-dental vowels.

- (3) Zulu h = nw (for nkh).

hayi-zela, awayi-zela, to have a tickling sensation in the throat.

- (4) Zulu h = ny (for nkh).

namba, to go, nya-we, foot; Hlonipa nyamba, to go.

A further stage of development is reached when this w or y is eclipsed by the nasal, leaving no trace of the original sound.

- (5) Zulu h = n (for nkh).

nawukela, to be grieved at, to envy, Hlonipa nawukela; un-nawu, strong emotion, Hlonipa un-nawu.

- (6) Zulu β = n (for nkhi), nw (-nkhu).

ili-su, stomach, Hlonipa ili-su, ili-nwa.
ili-selo, furrow, ditch, " ili-nkele, ili-nole.

- (7) The clicks q, x, c commonly appear as n in

Hlonipa, & as there is nothing to indicate the real values of the former, n(=h) may represent nkh, nqh, ngh, ngh.

s, (θ) = nta.

Zulu s = nta.

Tonga sence, Zulu sence, to drip, drop, ntona, to drip, fall in drops; scele, ntula, to seed, require, want; isi-nu, belly, ulu-ntu, outer end of the bowels or belly; sa, to dawn, ntula, begin to dawn. (The combination nta is not permitted in modern Zulu but is found in the neighbouring dialect of Thonga: cf. Ronga ntawalo, burden, ntawaba, music, ntawu, shadow).

It is probably that in some cases s in Old Zulu passed into hard r, as z did into soft l; but the loss of r makes it difficult to distinguish the one from the other. With the nasal, nr(=nl) easily passed into n, as in safuna, nafuna, to scoop out; where there is no nasalisation, l (for r) remains, as in sanguluka, laluka, to regain consciousness, to come to one's senses.

Palatalisation of l, r by i-consonantal leads to the interchange between l & sh or the click. The former was previously illustrated: in the latter case, it is the click that is nasalised.

Zulu l = c (<li): nx(=nr, nli).

Zulu: lence, lingo, libala, lobola, lwa, ua-lana.
Hlon: cence, cingo, cibala, cobola, owa, ua-canu.

With the nasal.

landa, to follow, Hlonipe canda, nassa.
landela, follow after, " candelu, naxsela.

w(or f)=mha. The combination mha cannot be distinguished from mh,

but we also find mh for mha; hence the spirant w nasalised may occur as mh or mf. But in Ronga & Thonga the aspirate mha is still used, e.g. mphongolo, barrel; mphinyi, handle, haft, Zulu u-mhinyi, Cavana mo-fing.

In Shambala, n+h (for f) passes into n-pa.

Zulu w = mp, mf or mv.

wi, to flow, mpo-mpo-za, to flow or stream out; wala-zela, mpula-zela, to act in a careless manner; weba-zela, to wag flapping about, mwa-mwa, to flap, flutter; mpakula, mukula (with vocalisation of w into u), to slap one's face with the palm of the hand; fufa-za, mvu-mvu-za, to scatter, sprinkle (for *nwey-); fi-fi-yela, fi-mfi-yela, to screw up the eyes.

10.

Voiced Spirants.

The voiced aspirates gh, dh, bh are obsolete in Zulu, or at least appear to be so, although still to be found in other dialects. For instance, nba is met with in Jonga (cf. Jonga ngasla, lion), nda in Ronga & Thonga, (cf. ndhilo, fire); & mbi in Zulu & Ronga. For the guttural palatal & velar, Zulu commonly substitutes click-sounds,

but the weak character of *ga* is apparent in Zulu as it is in Tshi-
arion speech where original *ga* is never found except as *n*. In
Zulu *ga* as a palatal or velar was generally softened or vocalised,
passing readily into the combination *ny* when nasalised, or
alternately into *n*, when eclipsis of the guttural was complete.
That *ng*h or *ñ*gh was a very common sound in Old Zulu may be inferred
from the frequency of *ny* in modern Zulu as an initial nasalised
palatal: but one must not suppose that *ny* is in every case derived
from *nga*, as previous examples have fully proved. Where, however,
this *ny* really stands for *ng*h or *ñ*gh, the nasalised forms of palatal
y(*j*) or velar *γ* spirant, it points to an original Indo-Bantu *k*
or *q*, according as the sound was palatal or velar. Thus, from the
Indo-Bantu root **qen*, to sing, whence **qen-γ*, 'the songster',
are obtained two Zulu forms **γoni*, -*ñghoni*, bird(-Beseq. chor-*i*,
Sent. chenre, *chère*), *i-nyon-i* being the nasalised form of **γoni*.

- (1) Zulu *j*, *y*, *ai* = *ng*h (then *ny*, *n*).

tshala, to sow seed, *alwa-nyala*, to sow seed scatteringly
(*alwa*, scatter); *bi-jala-za*, *ni-nyale-za*, to empty out
entirely; *ma-ñi-nyane*, *ma-ñi-nyane*, soon; *-tshazo*, *-nyeso*,
the half of a split gourd; *ncane*, little (for *n+ñane*), which
forms diminutives in *-zane*, *-jane*, *-yane*, *-ane*; *saba*, *ngaba*,
to refuse; *gwa*, to perceive, *Hloniphe nawa*; *ndokola*, to
jest, *Herero nyehere*.

- (2) In dialects, Zulu *j* may occur as palatal *ñ*. Cf.
jingo, nape of the neck, *Ruvu ñgingo*, *Gama ñiño*, *Sukuma*
ñhingu; but the history of aspirates in these tongues is
not clear, & *ñ* may not always be the substitute of *ñ*.

- (3) Zulu *j*, *y* = *ngx*, *nx*, *ny* (or *n* by eclipsis).
n-jalo, so, thus, *Hloniphe ngxalo*, *nalo*; *n-jani*, now, *Hloniphe*
ngxani, *nani*, *Suani* *ñani*; *jaba*, to be abandoned, *Hloniphe*
gxabas, *nabas*; *jabula*, rejoice, *Hloniphe gxabula*, *nabula*;
jiva, to become thick, *Hlon. niva*; *jaja*, tarust into,
Hlon. noma; *ili-juba*, rock-pigeon, *Hlon. ili-nube*; *ya*, to go,
Hlon. na; *isi-yepau*, any long-haired fringe-like thing,
Hlon. isi-napau.

- (4) Labialisation by *u*.

Zulu *jw* = *uw*.

ili-jwabu, *Hloniphe ili-uwabu*, the outer rind or peel of
a skin.

- (5) Zulu *c*, *q*, *x* = *ny* (or *n* by eclipsis).

nve, one (fr. **ñghe*), *Hlon. cawe*; *u-nyawoti*, a light-bronze
ox; *Hlon. ~~u-nyawoti~~ i-cawoti*; *i-nyaketho*, *Hlon. i-caketho*,
north-east wind; *ulu-nya*, *Hlon. ulu-ñn*, callousness.

Zulu *c* = *n* (with loss of *y*).

Zulu: *oweba*, *onwe*, *owazinula*, *isi-coco*, *isi-cotho*.
Hlon. nentsae, *nuna*, *nozizula*, *isi-nene*, *isi-nentsae*.

- (6) Zulu *q* = *ny* (or *n* with loss of *y*).

isi-qoko, cap, hat, *Hlon. isi-qoko*, *isi-noko*.
Zulu: *qaphela*, *qamba*, *ili-qawo* = *Hlon. naphela*, *naba*, *ili-nawe*.

- (7) Zulu *x* = *ny* (or *n* with loss of *y*).

xakaza, *nyakaza*, to put in disorder.
Zulu: *xaga*, *xuma*, *xova*, *xoye* = *Hlon. naga*, *nuna*, *nove*, *nwa* &
zandhi.

For *ada* Zulu may have fricative *l* interchanging with *nd*.

Thence *ndile*, fire, Zulu *lile*; *ukuti lw*, -*adi*, to fly
up into the air; *ulu-limi*, tongue, *u-adimi-bhili*, a double-
tongued person; *ili-lebe*, *izi-ndoko*, pudenda feminae; *ili-
lala*, a fan-leaved palm, *u-adala*, fruit of the *lala*-palm,
for Old Zulu **zala*, **ndhala* (Sent. *tale*, Sanscrit *tala*, *vela*).

8(u) = non. vels, to come to the front, pa-abili, in front (a double locative from pa-a-vel-i); vata, to put on clothes, embata (=an-, intensive particle, & vata), to clothe the body with a blanket or loose garment; vata, to leave things scattered about, vata, lie open or exposed about: mbhili, bhili, two, Herero viri, Herero veri, two, Zulu ili-wale, a twin (= "one of two"), Angoni wili, two (a dual): Angoni -wi, Zulu mbhi, mbi, bad; cf. also Pokomo wi, mbi; Mika -i, -mbi, bad.

11. HISTORY OF THE NASAL IN ZULU.

II. Post-tonic.

A. The Aspirates.

After the nasal has breathed & voiced Aspirates ka, ta, na, da, ba pass into the voiced & breathed Stops k, t, n, g, d, b.

- kh = nz. nakha (for ná-khu-o), nángo, there it is; isi-súko, origin, súngula, to begin; in-tsanku, in-tsungu, a species of climbing plant; shika-qa, shingo-aka, to fascinate one by spells & charms; shiki-la, shingi-sala, turn away with disgust; isi-aleka-tana, isi-: hlonga-tana, a hardy person; um-gika-lulu, um-singi-: shili, hindrance, difficulty; zaka-zaka, zanga-zanga, to wobble, stagger about; shole, copper, songe, copper or brass wire.
- th = nd. thatau, three, thandathu, six (= thathu-thathu); peth-ula pend-ula, to uncover; fethu-zana, fend-eka, to be bent inwards; isi-tho, the lower part of the leg, um-co-ndo, a thin, scraggy lower leg; um-so-ndo, a neat-looking calf or lower leg; isi-thotho, um-thondo, penis.
- pa = mb. sipa-ula, simb-ula, to pull or tear up; alamban, to wash, Hlonipa nyambisa.
- ga = nk. gaorro-za, buushu-la, to break off; nenka, nanga, to be nauseating or squeamish; lece, to dangle, swing, lence, to hang, suspend; onke, all (= Basq. oso, Aim. ingi); ili-kopoco, ili-kobongo, an eye-like face. (nk medial in Zulu is a comparatively ~~new~~ rare sound like medial g: hence it is usually softened to ng when it intervenes with the clicks).
- da = nt. owe, to be bright or clear, owe-ba, to become clear, owe-be-du, to be perfectly clear & still, awa-nis, to be perfectly calm or still, cwa-ta (= cwa-da), to become clear.
- ba = mp. shaba, shampa, to become a failure; sha (Old Zulu *jaba gampu, to distribute, share, divide; nama (=na-m-bha-o), here they are; nampo (=na-m-bha-o), there they are.

12. B. STOPS.

After the nasal has breathed & voiced Stops k, t, n, g, d, b pass into the voiced & breathed Spirants y, z, β(y), h, s, w(z).

- k = nk. (1) Zulu k = ny, nj, nka.

okela, to bring fire for, Hlonipa ontshela;

- (2) Zulu k = n (with loss of y).

diki-bala, dia-wa, to be tired out; aka, to build, Hlonipa ana; paka-qa, be elevated, many-aka, to make up.

t = nt. ota, to burn, Hlon. ontana; isi-chotao, hailstone, Hlon. isi-montsae; ua-Suta, a Sonto, Hlon. ua-Twintshi; ili-Kunzi, shadow, Ronga nthuti.

p = ny. This more commonly occurs as m B, but fricative β is now identified with the voiced explosive b. Hlonipa palatalises medial p into ntsh, which has passed through the intermediate stage of m β i. opa, to bleed, Hlon. ontana (=om β -ia); ili-jalambu, a forest-creeper which is named from English 'jalop'.

g = na. For this obsolete sound other substitutes are used.

isi-lxiru, isi-honga, a screen or shelter; u-zagiso, mums, Hlon. u-zagisico(=*sang-).

d = ns. For this obsolete sound which is very common in Eastern

(1) dialects, Zulu has ntsh before i, uo, & rarely uz.

ulu-si, ulw-anten, a small, acient, (=Sant. so, andke); banzi, broad, ili-bada-bezi, a big, broad, flat foot; swauzi, water, Hlon. andu; ili-wezi-manzi, a water-snake, Hlon. ili-lesi-mada: dindo, sinze, merely, just, simply.

(2) Owing to the absence of nan, the palatals na & za are both represented by ntsh(=n+sh, n+zh). The interchange between d & ntsh medial represents d = nsa. Compare

odwa, ngodwa, yedwa, kodwa, self, Hlonipa ontswa, ngentswa, yentswa, kontswa.

(3) It is uncertain whether ns passed into n through the intermediate stage of nr. An instance of the permutation of d with n, however, occurs in saduka, sanuka, nramin, nramula(=*sanru-), to stretch the legs apart.

b = mw.

(1) Zulu b = mw(or n with loss of w).

dalibu, dalenu, to spring or sprout up(for *dalinwu);

(2) Before palato-dental vowels.

hlebeza, nyonyeza, to slander; soboza, swanyaza, to fall or hang loosely about in a limp manner.

(3) Assimilation of mw to m.

cebanga, camanga, to consider, reflect; pama-zela, pama-zela, to do anything awkwardly; gabo, half, gaba-am, half-way("half side"); ndwabela, ndwamela, to be carried away in thought or imagination.

13. ~~h~~

5. SPIRANTS.

After the nasal the breathed & voiced Spirants h, s, f, y, z, v pass further into the voiced & breathed Aspirates kh, th, ph, ch, dh, bh.

(1) Zulu h = ngi (=ho, ny, ng).

a = nza. munu, mnyu, acid, salt, sour(of. Herero om-ongun, salt, Swah. ch-ungu, sour); naye, to suck the breast, fr. *ehgho (Sant. ehgh, mother, female); munce, mnyce, steal; ili-zinyo, tooth(=*zingho); noma, nonga(=honhon-a), to snore; gwica, gwinga, gwinga, to swallow; gunga-bala, gunga, become stiff or rigid; um-naga, um-panga, a kind of bush-fern; gogo-bala, kongo-bala, to draw up the limbs

into a contraverted position; um-dalovanga, um-dalovanga, um-dalovane, the fever-tree of Swaziland.

- (3) Zulu *na* = *nga* (nga, na, ng, nda).

vovovova, vovovova, vovovovova, to fall down heavily or limply; azi, to know, Nlon. angci; bazi, to shave, to pare, Nlon. nanga; liza, lendala, be weak, enervated.

n = *nda*. Nlonipa has *n* (also *z*) where Zulu prefers its nasalised form *ndi*. Thonga uses *nda* medial but not Zulu.

- (1) Nlonipa kanza, to love, Zulu thanda, Thonga yandha; Nlon. naza, follow, Zulu landa; Nlon. ulu-knazo, desire, liking, Zulu ulu-thando, Nyanja konde; Nlon. ili-chosa, Zulu ili-thanda, head; kosi (obsolete), neck, -whence isi-kon-kosi, nape of the neck, Swa. ki-kosi, nape of the neck; Zulu un-konde, back of the neck.

- (2) Zulu *s* = *nda* (or *nd*, *l*).

lalo, pain, londa, to rain; lulu-zela, lundu-zela, to glide along.

w(*f*) = *mba*. Zulu *w, f* = *mba*.

- (1) ulu-nyawo, foot, hambha, to go; tawu-zela, to be fat, glossy; or sleek, tafa, to be sleek, smooth; tafu-zela, to walk like a fat or sleek person, tamba, to be soft, either of body or character; un-tofu, soft lead, tamba, to be soft; nyakafula, nyekambula, to scold.

- (2) When *w* is vocalised, *mw* becomes *m* by assimilation; but this may be strengthened to *mba*.

Zulu *w* = *m*, *mba*.

wu, to become exhausted, done up, worn out, wuma (= wu-wu, wu-mu), to get shrivelled up, dry up, get wizened, isi-wumbu, black rust of diseased Infir-corn; li- (obsolete), to cut, -whence / isi-lima, one physically deformed, Sunda lima, deformed; Zulu lima (= li-mu), to cut up, hoe, cultivate, un-lemba, a native hoe.

- (3) Zulu *w* = *ny*, *mba*.

When *w* is vocalised before the palato-dental sonants, *nw* becomes *ny*; but this may be strengthened to *mba*.

ubu-lawu, a love-potion or charm, un-lawu, a medicinal charm (= Sent. lagu, a spell, charm), u-lanyazine, a love-charm, lumbha, to work spells or black magic, to do anything of a wonderful nature.

14. VOICED SPIRANTS.

y = *nka*. Zulu *y, j, tsh, γ* = *nka, nqa* (or *nc, nx, nk*).

γ = *nqh*.

yafula, gancula, to spring, lean (whence ili-waja, a hare); kosho-bala, koshu-bala, to be lean or emaciated; Old Zulu loy- (Idb. 'leq-'), to shine; - whence loko-za, lanku-za, lanta-za, to shine faintly; palu-za, penqu-za, to scratch up the ground.

- z* = *nta*. (1) Zulu *z* = *nt*.
thazabula, thantabula, to scream.

- (2) Zulu *z* = *nts* (the affricate for *tn*).

umzi, kraal, nation, earth, pantsi, below, under, 'on the earth'; bintsi, crowd, from bintsi (Sent. phasi).

(5)

Zulu 1, nt = nta.

swila, to sink down, Hlonipha ngwinda.

Fricative 1, for nta medial with the nasal & z without it, occurs in Zulu where the Indo-Bantu sound was t.

Hence, Zantali medial t, nt = Zulu z, & l for nta.

$\beta(u) = \text{mph.}$ The pure labial fricative β is now confused with the explosive b; while the aspirate-mph is most frequently identified with mf.

Zulu $\beta = \text{mp, mf.}$

isi-hobe, isi-hamfu, a poor or beggarly person;
u-shebe, u-swempe, a large fat man or beast: hobe,
to rage, like sickness, or fire, hamfu-za, to rage
furiously.

15. From the evidence of these Zulu sound-shiftings, we conclude that the permutations of consonants move in an ordered & methodical manner, aspirates passing into stops, stops into spirants, & spirants into aspirates, thereby proving that the original alphabetic sounds of Old Zulu were relatively stable. It has been shown that the palatalisation, labialisation, or nasalisation of sounds also proceeds along very definite lines which leave no room for linguistic confusion because modern Zulu is only carrying out to their logical end the phonetic laws of sound-change which were established in Indo-Bantu speech before the Zulu language ever came into being. Those sounds which we may call unstable are the Hottentot clicks, & these Zulu has not yet assimilated, although we have endeavoured to prove from their permutations that Zulu is, unconsciously perhaps, subjecting them to the laws of sound-change which are unknown to Hottentot. The clicks have displaced a variety of gutturals, palatal & velar, ^{twelve in number} breathed & voiced, which are not less than ~~twelve~~ (viz., velar q, g, qh, g h, x, y, ~~and~~ and the labio-velars qu, qhu, gu, ghu, xu, yu). & so far as their shiftings are evidence, that number is fully represented. It may be that Zulu has simplified the richness of its guttural series by adopting these alien sounds. It has at the same time increased the difficulties of the philologist by obscuring the older sounds, which have to be known first before Zulu words can be traced into Basque & Holarian languages.

CHAPTER VI.

HISTORY OF THE PRINCIPAL INDO-BANTU SOUNDS
IN SANTALI, BASQUE & ZULU.

1. The principal consonants of the primitive alphabet of the parent-speech have already been traced in Santali, Basque & Zulu, but reference may be made to the Tables in paragraph 51 (Chapter II). From these it will be gathered that the minimum number is at least 36, exclusive of sonant liquids & nasals, & other sounds, simple & compound, which are not mentioned in these Tables, although they are met with in various Kolarian & Bantu dialects. To illustrate the operations of phonetic law, however, half that number needs be considered, & we shall discuss here the following 18, viz., k, t, p; g, d, b; kh, th, ph; gh, dh, bh; a, e, u, i, y, z.

2. For the purposes of philological theory, we have to assume at the outset the former existence of certain types of ~~speech~~ speech which were different from existing types, although the latter are derived from the former. Thus, in the case of Zulu, a language which is not directly derived from the parent-speech itself, we assume that it ~~is~~ has originated from "Old Zulu", which in turn has come down from the "proto-Zulu" stage. The last of these has been derived from "proto-Bantu", the supposed parent of all Bantu languages, while "proto-Bantu" is taken to mean a very early type of Indo-Bantu speech, with divergences of grammar & phonetics, peculiar to ^{the} Bantu group, which must have formerly flourished in dialects of the common mother-tongue.

OLD ZULU is simply Modern Zulu in a better preserved state. As an Indo-Bantu dialect, it is presumed to have Indo-Bantu sounds without the addition of Hottentot clicks. Of this obsolete type Zulu may be regarded as the direct offspring which has departed considerably from the former's native purity of speech.

PROTO-ZULU is the parent-speech of Zulu from which ^{the latter} ~~it~~ is very far removed. It is Zulu as it was spoken in Bengal or Burmah over 30,000 years ago, -almost a Kolarian language but with peculiarities which are the foundations of Bantu phonetics.

PROTO-BANTU is taken to be the parent of all Bantu languages but, as we understand it, has little in common with modern Bantu. It can only be reckoned a variation of the Indo-Bantu parent-tongue, of which there must have been many dialects, & can, therefore, be more fitly compared with the oldest forms of Kolarian & Ainu than with Basque & modern Bantu. One of its regularities which was discussed in the 2nd chapter, was the use of intermediates in lieu of voiced consonants, whereas in every stage of Bantu, -Old Bantu & Proto-Bantu alike, voiced sounds are known to have existed. The non-existence of true voiced consonants may, accordingly, be claimed to belong to a very arctic stage of linguistic development which preceded the time when Indo-Bantu dialects flourished in China & Indo-China. The conclusion is, then, that Proto-Bantu as a form of Indo-Bantu speech without voiced sounds, is Indonesian in origin; & that Proto-Bantu ^{Zulu was} ~~was~~ a highly developed Asiatic form which was more of Proto-Bantu, ~~than~~ like Santali than the immediate parent of Bantu speech so far as phonetics are concerned.

5. The phonetic Laws of sound-change governing the Santali, Basque & Zulu (also Proto-Zulu & Proto-Bantu) languages may be briefly referred to as "Scott's Laws", & include the primary consonantal shiftings (Proto-Bantu & Proto-Zulu) & the secondary (Modern Basque & Zulu). In the former case, the shiftings are from breathless sounds to voiced & voiced to breathless (Proto-Zulu); in the latter case, the shiftings are from aspirates to stops, stops to spirants, spirants to aspirates (Old & Modern Zulu). From this it follows that the Proto-Zulu shiftings represent the ~~intermediate~~ stage between original Indo-Bantu & modern Zulu; while if we substitute the so-called intermediate consonants where Proto-Zulu had fully voiced sounds, we obtain the Indonesian or Proto-Bantu values. So far as Basque is affected by sound-shiftings, the first series is not represented, & it is also absent in Kolarian; but the Law relating to the secondary shiftings applies to Basque & Zulu alike, a circumstance which suggests that, from a purely phonetic point of view, Basque might almost be considered an old type of Bantu speech.

INDO-BANTU LAWS OF SOUND-CHANGE.

[1]

FIRST LAW.

(Kolarian & Basque Groups)

BREATHED & VOICED ASPIRATES in Santali become BREATHED & VOICED STOPS in Basque.
 " " " STOPS " " " " & VOICED SPIRANTS in Basque.
 " " " SPIRANTS " " " " & VOICED ASPIRATES in Basque.

[2]

SECOND LAW.

(Basque & Bantu Groups)

" " " ASPIRATES in BASQUE become VOICED & BREATHED ASPIRATES in Zulu.
 " " " STOPS " " " " & BREATHED STOPS in Zulu.
 " " " SPIRANTS " " " " & BREATHED SPIRANTS in Zulu.

[3]

THIRD LAW.

(Proto-Bantu as an Indonesian language, circa 25,000 B.C.)

BREATHED ASPIRATES, STOPS, SPIRANTS in original INDO-BANTU become INTERMEDIATE " " " Proto-Bantu.

INTERMEDIATE ASPIRATES, STOPS, SPIRANTS in original INDO-BANTU become BREATHED " " " Proto-Bantu.

[4]

FOURTH LAW.

(Santali & Proto-Zulu)

BREATHED & VOICED ASPIRATES in OLD SANTALI become VOICED & BREATHED ASPIRATES in Proto-Zulu.
 " " " STOPS " " " " VOICED & BREATHED STOPS in Proto-Zulu.
 " " " SPIRANTS " " " " VOICED & BREATHED SPIRANTS in Proto-Zulu.

5.

A SYNOPTICAL VIEW of the PRINCIPAL INDO-BANTU SOUND-SHIFTINGS.

INDO-BANTU Values.	SANTALI	Proto-BANTU	Proto-Zulu	OLD & MODERN ZULU		OLD & MODERN BASQUE
				(Nasalised)		
				Pre-tonic.	Post-tonic.	
K T P G D B	K T P G D B	K' T' P' K T P	G D B K T P	Y (1) Z β (u) H S W	KH DH BH KH TH PH	H S W Y (1) Z β (u)
KH TH PH GH DH BH	KH TH PH GH DH BH	K'H T'H P'H KH TH PH	GH DH BH KH TH PH	G D B K T P	Y (1) Z β (u) H S W	K T P G D B
H S W Y Z β	H S W Y Z β	Y (1) B' X H S W	Y (1) Z β (u) H S W	GH DH BH KH TH PH	G D B K T P	KH TH PH GH DH BH

6. Key to the sound-differences between Santali and Basque.

SANTALI		BASQUE	
k = 1.	kar, to do; kobor, grove	hari, do; hob, grove (hobir-etu, to buy).	
t = 2.	katha, word; turu, 6	hitz, word; sei (=seri), 6	
p = w.	pīrus, blastings; parhao, road	pritz, olitz, blastings; iznharri, to read (=wgak-)	
g = y.	añgra, head, care; aghar, November	ajol, achol; Azaro	
d = z.	hadam, man; oda, wet	gizon; eze	
b = β(u)	baḍae, to know; ḍavlahā, foolish	ezauñ; bera	
kh = k.	khundau, chase; khidiri, loan	khendu; khidila	
th = t.	then, place (ative suffix); than, to clang; ther, to thunder	tan (place), a ative suffix; tankatu; turmoi (thunder)	
ph = p.	puti (Skr. put), to swell; uphar, to float (like froth)	puztu; apar, froth, foam	
gh = g.	harao, conquer; har, take, hold	garaitu; geratu	
dh = d.	ardha, half; dhairu, tarentan	erdi; dur-dusiatu	
bh = b.	bhachkao, matter; buru, head, brow, hill	buhez-katu; buru	
h = (kh)	ghij, thing; ayur, to lead	kai, gai (=khai); ekharri	
ś = (ta)	asrae, shelter, refuge; asor, to cease raining	athari, a refuge, shelter; atheri, to clear up after rain	
w = (ph)	tuwet, tuhet, to cram, stuff; amela (Sanskrit), abundant	tapatu; oparo	
y = (ga)	jao (Skr. yava), barley; (Sanskrit. yudh, battle, fight)	gara-gar, barley (=ghevar-); gudu (=ghudu), battle, war	
z = (da)	baḥar, market; esel, fair, light-coloured	batzarre; eder, pretty	
β(u) = (ḥ)	awala, rice; Baḥke, Baḥque; baḥa, a dwelling; naḥel, plough	aberax; Evsk-al-dun; baḥa, naḥet; naḥer, plough	

7. Arrangement of sounds.

1. Stops or explosives:

Labial p, b; Dental t, d.

2. Aspirates:

Labial ph, bh; Dental th, dh.

3. Spirants:

Labial w, β(u); Dental s, z.

4. Continuants:

Palatal k, g, kh, gh, h, y(i).

(The history of the Velars, Palato-velars, and Labio-velars

is omitted for want of space. Contractions used include Idb. =Indo-Bantu; Sent. = Santali; Skr. or Ser. = Sanskrit; O. Basq. =Old Basque; O. Z. = Old Zulu; pr-Z. = proto-Zulu; pr-B. = proto-Bantu;obs. = obsolete; sg. = singular; pl. = plural; m., masculine; f., feminine;n., neuter; n. inan., neuter inanimate; the asterisk * denotes

an hypothetical type or form whence modern words or sounds are

derived. There being no clicks in Indo-Bantu speech, the symbols

q, gh, gu, qhu are the velars corresponding to the palatals k, kh).

8.

A. LABIAL STOPS.

Idb. P = Sant. p; Bnq. W (or vocalised); Zulu β (β , v).

Santali.	Zulu.	Santali.	Zulu.
par, a beam	valo, bar, lid	poson, to look	VUZA
pip-ri-an, butterfly	alu-venna-ne	pui-pui, small	VUVU-ka
pinda, ridge	vundhto	chahap' (=chāp'), gape	haβuza, havuza
sap', to swear	jivi-za	pē-pē, buris-sound,	veve, corn
clup, tail	shoβa	(onomat.), pe-prēt', horn	
hapu, goat-sucker	zavo-lo	phere, gusa forth	vola
chepech', to suck	cembuza	po, dig with the hoe	mbha, dig
chepe, died of earth	simbha, died	pīrus, distant	amash-bhila
	of dur. (Xosa)		first milk
	died of earth	(Skr. pant, miser)	mbanya,
kapl, axe	zombae		be miserly
chepe, consider	caβange,	paknet', chubby-cheeked	vongoto,
(Ho dialect)	camange	(said of girls)	full-breasted
			(said of girls)

9. Santali.

pa, they (collective infix in old noun-plurals); aim pa, they, to be ; lopak', oave, hollow (Hachin lup, grave, lup-ra, (a locative), burial-place); sepeñ, to carry in the hands held flat; poba (=sep-wa), handful

Zulu.

βa, they, to be (an old plural of an, to be) ; ili-liβa, grave; (locative of liβa; pr-B. lup'eri); nyaβa, to hold in the hands together; un-nyaβa, the hollow of the hand

10. Exceptions:

The words for butterfly are Indonesian loan-words from different dialects, certain of which used prefixes where others had suffixes. Theoretically, proto-Bantu would have employed a prefix, the Bantu & Santali forms pointing to an Indo-Bantu root with p suffix (cf. Sant. pip-ri-an, butterfly = Bnq. pimpi-ri-na). The verb-root enters into the Zulu compound wabe-cala (O.Z. *ya-ya-), to flap the wings, to flutter. A variant of this is pere (=Idb. *the-bhe), to flap or flutter, - a discrepancy which clearly indicates borrowing at a remote period when the Raint Law was in operation in Proto-Bantu. The simplest forms of this Indonesian word seem to occur in Efate bebe; Vaniti, Marquesas, etc., pepe; in Epi a liquid suffix appears, le-pepe; but the majority of these dialects prefer a suffix; cf. pepe-le (New Georgia), pepe-ul (Amboyna), bebe-ulo (Savo), bebe-ru (Mulan, etc., New Guinea). Thus, the Polarian words Ho papelo, Santali piprian, butterfly (cf. pete, paste, pak, flutter), & Bnq. pimirina (Letia papilio) are ultimately derived from some Indonesian type *pepe-r-n, whereas Proto-Zulu used this r as a classifying prefix (Pr-Zulu *g-bebe, uru-bebe; from Pr-B. *uru-p'ep'e).

11. In Bnq. the hard labial fricative w is usually vocalised to u or v, or even a; or it may disappear altogether without leaving any trace behind. Sometimes, the labio-dental β occurs but this sound is an exotic, & generally replaced by a.

That the want of *f* in Old Basque is an established fact may be inferred from its absence in Iberian inscriptions, & also, that after the 3rd century A.D., the conversion of Latin *f* into *h* became general throughout the Peninsula. It is clear, therefore, that the Roman *f* was not indigenous to Spanish dialects, yet it is possible that this *h* was a labial which came out of *fh* rather than *f*. In Añu, the *f* in foreign words has the sound of *ch*; hence, perhaps, the interchange between *h* & *f* in Basque or Santa we should attribute to this obsolete fricative *fh* (or the digamma *F*). Owing to the difficulty in representing this fricative, Basque employs a variety of substitutes, viz., *h*, *v*, *f*, *ph*, *p* or *b*, & *m* when it is vocalised. More often it is dropped.

(1) *F*(*w*)=*h*, *y*, or vocalised.

unil, funnel; lura, to puff; aheri, suari, supari; naba, a bean (Latin faba); harina, irina, flour (Latin farina).

It is lost before *i*: tui, to spit (=O. Basq. **f*iu).

Also lost before liquids: lore, flower (Lat. florem).

By assimilation: aber-facho, abarracho, a faggot of wood; from aber, branch, facho, faggot.

An exception which has survived as a religious archaism is the word froen, which De Azkue explains to mean:

"les douleurs funèbres que l'on rend aux décedés les jours qui suivent l'enterrement". Its Santal cognate is puruchun, "to perform the funeral obsequies, to remove ceremonial uncleanness by sacrifices or offerings": & related to Zulu hlunga (=O. Zulu *ulunga), to cleanse ceremonially.

(2) *F*=*f*, *ph*. infernu, infernu, Hell (Lat. infernus); fede, faith; falsa, sickle; filda, builds, later, turkey; fago, phago (Lat. fagus), beech-tree.

(3) *F*=*p*, *b*. impernu (Biscayan dialect), Hell; paltan, false; retu, fate; paltan, to fail (Span. faltar); pago, bago, beech-tree; beste, feast; bortan, forms; iburni, Hell; farra, barra, to laugh; afaldu, abaldu, to have supper; bare, spleen (Sant. pile); beazua, gall (Sant. pit).

(4) *F*=*m*. mun, fun, muff, muin, narrow (Zulu *β*anawa); ifini, ipini, ibeni, imini, to set, put.

12. Before liquids *l* and *r*.

In Santali, the labial or liquid may be dropped but not both; in Basque & Zulu the labial fricatives are elided owing to the weak character of *F*(*w*) & *u*.

(A). Sant. pr, pr, pl, pl.

pato, rata, rubbish; pete-roto, to quarrel (Basq. inarduki); paco-roso, at intervals; padgo, redgo, half-cooked; pete, lete, moist, soft; pagui, lagui, to crawl; parra, larra, children; pitia, lirici, little; apara, harra, old; nether, grand-daughter (Etr. napti).

- (B) In the middle of words, when l or r is elided before t or d, the dentals appear as cerebrells; e.g. Sant. pathe(= *plt-), to bind, plant; Basq. lotu(= O. Basq. *lotu), to tie, bind; Zulu hli-hluzi(= O. Z. *ulzu), a knot.

- (C) Other examples of Zulu hl for O. Zulu yl are:

Sant. rese, broth(= Idh. *pti-), Zulu hluzi.
 " porao, to burn(Idh. *prush), " hlöse.
 " puekhe, puekhar, to ask(Idh. *prsk-, Sanger. pracan), Basq. eske, fr. O. Basq. *prsk-;
 Zulu hlusa, to importune.

13. Where Zulu b, v or w is represented by p in Santali, the true character of b is shown to be fricative β which is the Indo-Bantu pure labial aspirant formed by contact of the lower lip with the upper teeth. From this primitive bilabial have been derived v or y which are labio-dentals. Many Santal roots are turned into verbs by adding the suffix -p', which in Zulu passes into $y(\beta)$: thus, a-p', to align; la-p', to catch with both hands; se-p', seize. Cf.

Sant. aana-p', to gape, yawn; Zulu aa-wa-za, ha- β u-za, aa-vu-za.
 " aa-p', to eat, devour; " aa-wu-za, aa-vu-za, to
 oruna(O. Z. *ke-y-za).

(The verbal ending -za, to, which marks the infinitive is cognate to Sant. to, to, Basq. -tu, to, which forms the infinitive; all from Idh. -de, to).

14. A common noun-suffix in Santali is the neuter terminal ending -ap', -p', "thing"; as in sap', to seize, sap-ap', tools, implements; har, to draw with the hand, har-ap', a letter of the alphabet; sant-ao, to afflict, sant-ap, affliction; sat-ao, to stick together, sat-on', unanimity.

The plural -pa forms collective nouns but is infixed only:

mañni, village-chief; plur. aa-pa-ñni-ko.
 raj, a king; plur. ra-pa-jko.
 haran, old; plur. ha-p-ran-ko, the ancestors.

Ainu explains these particles than does Santali or Zulu.

The singular adds the suffix -pe, "thing"; whence hum-be, a whale, from hum, to make a blowing noise. The plural of this is pa, "they, to be", which is the inflected plural of the verb an, to be. Hence are obtained such forms as :-

Ainu ama, to put, place(Basq. imini, ifini); plur. ama-pa;
 ahun, enter, (pl.) ahun-p; hopuni, to fly, (pl.) hopun-be;
 rai, to die, (pl.) rai-pa; san, descend, (pl.) sa-p;
 ani, carry, (pl.) an-be; yan, descend, (pl.) ya-p.

From an, to be, & pe, thing, is derived the suffix -ambe which forms neuter nouns from verb-roots; e.g.

itsak, to speak, itsak-ambe, speech; mupeki, bright, mupeki-ambe, brightness; ~~ambele~~ rury, sea, rury-ambe, depth by drowning; epirika, to gain, epirika-ambe, profit; an, to be, ambe, thing, object, an-ambe, existence.

In Santali, such nouns are formed by the suffix *ap*, *op*, or *-p'*, which seems to be of the same origin as *-re*, *-ambe* in Aïnu, a neuter terminal ending derived from the verb 'to be'. In Zulu it appears as the class-prefix *ubu*(=*ufu*, βu) which forms abstract nouns: from verbs, adjectives or other nouns: e.g. ~~ubu-izela~~, a deer-barrel (Sant. *kael-op'*); *ubu-hi*, badness(=Sant. *pa-p*); *ubu-kali*, professional smartness(=Sant. *har-op'*); & in Basque *gar-ai*, time(=*'gar-awi*), Sant. *har-op'*, time. As the Santali types of *ubu*, *ba*, *they*, *ba*, to be, are *yu* & *ya*, according to Meinolf, there can be little doubt that the consonant in the Zulu roots is not the explosive *b* but the obsolete bi-labial β . For the interchange of this bi-labial with *w*, compare also *ba*, *they*, beside *la-wa-ya*, those yonder; *yabula*, *sawula*, to bubble like water; *dabu-hela*, *hawu-hela*, to be grieved at; *nabuka*, *nayika*, from **na-y-ekz*, to be tattered, to fall to pieces.

15. Basque.	Zulu.	Basque.	Zulu.
auri <i>auri</i> , rain(= <i>*wari</i>)	<i>vula</i>	<i>fara</i> , door-bolt	<i>valo</i> , deer-bar,
<i>eu-rok</i> , they themselves	βa	<i>chupeta</i> (= <i>*chuf</i>),	<i>combuze</i>
<i>honda</i> , rise	<i>vunda</i>	to suck	
<i>sainan</i> , scold, abuse	<i>yova</i>	<i>fistu</i> , whistling	<i>vi</i> , to give a
<i>sin-oin</i> (= <i>*sifin</i>), swear	<i>jivi-za</i>		small whistle
<i>nawa</i> , a-naye, brother	<i>us-ne</i>	<i>fur-furis</i> ,	<i>vu</i> , rise;
(Ido. <i>*nep</i> -)	(= <i>*nayi</i>)	arrogance	<i>vu-yu-ke</i> , swell
<i>fite</i> , suddenly, all at	<i>vi</i> , rise	<i>pimpirina</i> (=	<i>ulu-vavane</i>
once(Sant. <i>pat-pat</i> ,	up sudden	<i>*fi-fi-ri-na</i>),	
suddenly)	:17	butterfly	

From the Ido. root **pey*, small, are derived Basque *fite*, mite, mote, in the eye, anything trivial; Sant. *pau-li*, a mote in the eye, pharsa, very minute, & the prefix *vi-*, as in *vilon*, little (whence (of the Santals, - Filan Madan, the name of Adam or remote progenitor) lit. "little man"). In Basque it may also appear as a suffix, as in *ica-pi*, a morsel, small piece; & in Zulu either as prefix or suffix. Compare *vi-li*, a mote or minute particle; *vi-bili*, a worthless body or scapegoat; *vi-ci*, small matters or events(*ci*, taking); *langa-bi*, "little sun", a flame(*langa*, sun); as a prefix it is common in Kongo, e.g. *fi-* in *fi-mbele*, a little knife(*mbele*, knife).

16. $\text{Idb, B} = \text{Sant. } b: \text{Basq. } \underline{u} (w, \beta, v): \text{Zulu } w (\underline{b}, \underline{f}, \underline{v}, \text{or vocalised}).$

<u>SANTALI.</u>	<u>ZULU.</u>	<u>SANTALI.</u>	<u>ZULU.</u>
labar, be garrulous	lawula, gossip	bobe, steamer	fefeza, lie
bades, to know	uk-wazi	bebasa, split, divide	vava
bakas, to brag	wawa-za	beton, reward, wages	viza
boulars, foolish:	isi-wula, isi-	loba, fat	livilivi
(Skr. bala, fool)	ula, fool	debe, tuak, horn	dalowa
(" bala, hair)	wale, hair:	haber, scratch	trovura
(" barna, tail-	(prefix ulu-, hair)	Jobu-nun, wasp	um-vi, hornet:
-feataard)	is-ala, bunch	bar, two	(O.L. ¹ nun-fi)
ba-lai, abundant	of feathers	ba-aba, to abound	wela, twin,
	va-ma, to abound	bayan	vendala, aerial

17. $\text{Idb, } \underline{\lambda}$ seems to have been a comparatively rare consonant and is often hard to distinguish from bi-labial β . Before l & r, Sonant or consonant, the labial or liquid may be retained in Santali but not both together; thus, bader, lador, steamer; bag, lagan, a bridle bit; burun, lurun, idle, lazy; bami, lagan, to lend, invest; bade, rede, rustling; bajan, rajan, pomp, music; baka, maka, an agricultural implement; band, read, entirely. After liquids or dentals, $\underline{\lambda}$ may be softened to m; as in tar-burj, tar-mbj, melon; taut-be, taut-ma, thick.

<u>BASQUE.</u>	<u>ZULU.</u>	<u>BASQUE.</u>	<u>ZULU.</u>
bilo, ula, hair	wale	gabim, saliva	kovula, mucus
bere, foolish	isi-wula, fool	betas, full	va-as, abound
bai, yes	vu-ma, essent	bil-gor, tallow, fat,	fu-ta, fat, volc-
bonulu, hornet	um-vi	grease, suet	volc, fat of suet

19. The labio-dental \underline{v} is not a Basque sound & appears to have been likewise unknown to the ancient Iberian dialects. In its stead we find \underline{u} , along with bi-labial β which Basque grammarians have not yet seen fit to recognise in the alphabet. When strengthened by the nasal both $\underline{f}(w, f)$ & $\underline{u}(\beta)$ pass into m,--probably through occlusion of these weak labial fricatives. Thus are obtained such forms as : mezpers, a vigil, mezperak, vespers (fr. Latin vesper); here-mete, by an endeavour or attempt (adv.); Biarritz, Miarritz; biga, miga, heifer; bilgor, milgor, suet, tallow/. It would seem from variations in Iberian orthography that the sound which the Romans & Celts of Spain pronounced \underline{v} , was voiced \underline{u} in Basque & its cognate tongues. Hence the natives dropped it when convenient, as indicated by words like noum for novum; vius for vivus; Doidenn for Dividenn. For contrast Iberian \underline{u} was mispronounced as \underline{v} ; hence Vascones for Uask- (Uask-), the Basques; Avobriga for Aobriga. It is, in fact, the old story of

Sam Koller's difficulties with the labial fricatives. In Basque dialects which are influenced by Spanish, the use of v is very frequent & readily interchanges with β ; e.g. gav, night, gab-a, the night, gav-on, good-night.

B.

DENTAL STOPS.

20. Id. T = Sant. t; Basq. S (sometimes r); Zulu s (sometimes l).

<u>Santali.</u>	<u>Zulu.</u>	<u>Santali.</u>	<u>Zulu.</u>
tah, s, one	zwi, one, only	gatau, to get	zuzo
tali, root, site, foundation	zu-angu, loneliness	keter, gnash the teeth	qa-qezala
toroch', heap of stones	za, site, foundation	khentok', dwarf	senzo
totka, nape of neck	zala	tem, tham, pillar, post, prop	sine
	zangwe	(Skr. temas, darkness)	zimo, dark

21. With fricative r & l for s & z.

Sant. tale (Skr. tale), palm-tree : Zulu ili-lala (= O.Z. *sala)
 " tarwa, pain, a bruise : " isi-lalo, lingering pain
 " phuli, mote in the eye (Basq. pits) : " in-yili, small particles
 " hatah, brains, Basq. garunak, garunak.
 " guruvu, to huckle, " kilzikaru, kilikaru.

22. Cerebral r may appear in Santali for the hard dental t or t'.

Sant. chep-ra, flat-topped (Skr. chipita); Basq. chab-al, zab-al, Zulu cessa, to be flat, cifi-za, flat-topped.

Sant. tale, a louse; Basq. zorri; Zulu zeze.

" Rara; to loosen (Skr. srath, slack); Basq. zilherze.

23. T medial may be dropped through syllabic contraction, as in

char, 4, from Aryan catar; it may be assimilated by r, as in upar-te, uparre, with, against. By combination with i, it is palatalised to en; by combination with u, it passes into p, but more often b which is a softened variety of p. Cf. charchari (= *kyastyarī), to whip, castigate; charkas, a spinning-wheel (Skr. tarkus); sacha, tree, from sat, truth.

~~tsi~~ The combination ts is sometimes primitive; e.g. kh sitsoen', dry, from Id. *sitgo- (cf. Latin sitia, discuss). Or it may originate from the dental nasal before k or q; e.g. kora, child, akora, childless (from an, not, without).

The explosives k, t, p may be elided before t or t'; cf. Sant. bhit, wall (= Skr. bhikṭi); pit, gall (= Skr. pitta); bat, batta, discount, exchange; nakl, nar-kar, grandchild (= Skr. napti).

Before r, the hard dental is softened to d which then becomes cerebral when the r disappears; as beda, stone-pillar, from Id. *pet-r, rock, stone; Basq. harri (= O.S. *ma-ri, stone, a little rock; Basq. haitz, aitz, rock; man-ast, *mine-rock, mineral).

24. According to the law of the Nasal it was shown that post-tonic z after n passed into nta, or its affricate form nts, or else fricative l appeared for either (Comp. V, §. 14(5)). Compare:

Sant.	ganti, gunthi, to count:	Zulu	bala (=O.Z. *xantha)
"	gunthi, knee (=ldb, *gon-ti):	"	dolo (=O.Z. *xionthe)
"	chonthao, pack, grab at:	"	gola (=O.Z. *xontha)
"	kante, throat:	"	xwole (=O.Z. *xenthe)
"	chats, mat:	"	santsi (=O.Z. *xianthi)
"	dhatin, to beat, strike (ldb, ghen t)	"	tantsula, wantsula, to swipe (=O.Z. *qxantha)

25. When there was a nasal sonant or consonant in the original root, or if the consonant was doubled, we generally find nd in Zulu instead of z, nta, nts or l. Thus, Santali gentho, knot, is in Zulu findo (=O.Z. *xundo), because the original sound was nta & not nt. This early pronunciation of nt as nta seems, however, to be dialectal in origin, Zulu pointing to ldb. nta where Santali & Basque roots point to ldb. forms in t or nt. Cf.

Sant.	pit (=Skr. pitta), gall:	Basq.	beszun (O.E. *Fessun); gall:
"	lateo, to lie in wait:	Zulu	Bindi, liver.
"	petao, to wallow:	"	etain, to rest; Zulu findo, waten
"	chetsao, lop, prune:	"	istil, wire, mud; " wanda-so, wallow
"	etech', to begin:	"	jetsi, pull: " wuni-ola, prune
"	pit-ni, moth:	"	ats, beginning: " andula, begin
"	hft, to love:	"	hasta-cha (dimin.) " nyundu, munda
"	pati, to prick, sting:	"	etsi (= *etsi), esteem " tonda (= *qenda)
		"	fizatu " wanda-si porcupine's quill

26. The liquid sonants are sometimes dropped before t in Santali, which is then softened to d cerebral. But in Basque these combinations cause the spirant s to become θ or th, & then d, just as l, r, y pass into lb, rb through an intermediate lb, rb.

Sant.	khad (= *kryta, Skr. kartá), a mine:	Basq.	hardia, a mine (=harθ-)
"	sados (= *sātom), a horse:	"	zaldi (=zalθi)
"	bad, ban, a flood:	"	uolde, a flood of water
(Sansk. vartula, spindle)		"	ardatz

27. In some instances the hard dental may be softened through the influence of the nasal but examples are rare. Thus, Santali dundu, owl, is derived from the onomatopoeic root tu-tu, to not like an owl; whence comes Basque duntz (O.E. *tun-tun or *(s)un-s(un) & probably also Hamba ndundu, Kuyu ndundu, owl or some kind of horn-bill.

Santali.	Basque.	Santali.	Basque.
teras, to roar	sara-ti, noise	lost-or, very long	luso, long
tesu, a spear	zane	pit, gall	beszun
tesar, a third	sudu	ati, a snout	azao, azau
terax, trough	seramas, gutter	atai, to take	atz-eran
teren, shoulder	sor-baida	etati, blow (of wind)	size, wind
terui, c	sai (O.E. *ser-i)	(Skr. anti, before)	aintzin, anzin
(an old dual-form of *ter, three)	kitzi-latu	terri, several	garri, so much
gutlu, tickle	kili-katu	(Skr. teras, very much)	
		(" ts, they)	-so (obs.): cf.
			gura-so-ek, parents

28. Before relatives, ~~z~~ts in Basque may become the affricate ~~ts~~, as in ~~chickor~~, dry, for ~~*chickor~~; otherwise it remains s without the dental combination. Thus, ats, joy, as-ker, glad; amets, amets, a dream, ames-char, ames-laitz, nightmare; chickor, dry (Sant. sit-koch'); oski, sandal, asee, sole of shoe (Sant. chatki, sandal); eskabia, crab (Sant. katkon).

Basque.	Zulu.	Basque.	Zulu.
sare, sashes, scarves	zāle	entzun, hear, listen	ezwa, feel,
zorri, louse	zeze, flea	(Sant. ote, hear)	perceive
zeria, part, piece	zhozi	(Xitzez, qnash, obs.)	
pazi, boiler	biza, pot	horas-kitzea, qnash	ga-gazela
onith-al, dwarf	zenze	the teeth	
(O.B. *chins, child)		fitemits, filth	ulu-ti-vi
oz-ar, big dog	ili-xoza		(O.Z. *vzi)
(Sant. kutu, kutru)			Herero otu- de

29. Id. D = Sant. d; Basq. z (sometimes r); Zulu s (sometimes z or l).

Santali.	ZULU.	Santali.	Zulu.
gadeso, to miss	kisila, kiza	dechi', climb	zeka
chada, separate	casa	dandrau, seek	zāza
badeso, know	uk-wazi	danok', hatred	zoco
chade, immerse	goza, wasa	den-de, naked	ze
de-la, come	za, zela	del, a dead calm	zola, be calm
bhadoch', to blunder	pazima	dand, cogitate	zindila
guda, anus	guzza	handa, pot	kanzi
der, to copulate	sata	sand, a bull	tunzi
der, day	mzole	kadhaa, reproach	yeza
daronja, huge	zadongwe	dahaga, bachelorhood	soka, bacchle
(Skr. hridaya, heart)	hliziyo	kundaa, corner	gōni, gosi
(" chhid, to vomit)	hlanga	hor, man, wife	-kazi, female

Instead of s, Zulu has also primitive l; but the latter sound does not seem to be primitive, & probably is derived from an old Zulu cerebral r, or a hard liquid r. Compare: V., 9 (13).

Sant. dungu, boat, canoe :	(Bantu rungu, lungu)
" lasok', to bite (= *dams; Skr. dams);	Zulu lase
" dād, pain	Basq. ondr-ko; tsai-londa, rain
" durum, sleep (HO dialect):	" l. lo; Zulu lala
" dhar, der, edge :	" ulu-lala
" in-de, non-de, here :	" (huna), " la, here (in compounds)
" phad, to open :	" phalatu, " vula
" qadi, chariot, waggon:	" gudi, " in-qolo
" gada, gara, river; Basq. churru, torrent;	Zulu -fula (= *vura)

30. Before n in Santali, d (or da) may be dropped; e.g.

~~gahudra~~, ~~gahudra~~; buda, bun, root, foundation (= Id. *bhaudhra).

Before d or t, it may be assimilated & disappear; as in rete, in a line, from rade, line, row, & the ablative suffix -te (Id. -de; Basq. -z). It is also assimilated by r, as in edrao, arroa, to bellow (= Basq. arro, bellowing).

31. *d* in Santali will be found frequently hardened to *t*, especially at the end of words. Thus, *sanat*, *sonat*, *see*, from Skr. *san-ant*: *rehet*', *root*, from Idh. **yrd*, **yred*, whence also Basque *erro*, *root* (= **erfo*); *balti*, *bucket*, *pail*, Basq. *baldi*. The terminal ending of many neuter nouns in *-t*, or *-t'*, owes its origin to the fact that the Indo-Bantu pronoun **-əd*, *it*, was commonly used as a suffix to form neuter nouns whether animate or inanimate; the corresponding particle in Zulu is the noun-prefix *ili*, *li*, *i*, of the 2nd class, which in other Bantu dialects is met with in the forms *di-*, or *li-*. For example, Santali *met*', *eye*, is the neuter inanimate of the root **meḥ*, **megh*, *to see, to look*, Basq. *begi-ratu*, *see*, *beantu*, *behold*; the suffix being the pronoun *-d*, *it*, added to the verb (cf. Kurku *me-d*, *Juane ome-de*, *eye*). It is very necessary to understand the composition of nouns of this class, as otherwise etymology may prove misleading. This old root ~~meḥ~~ runs through the Tibeto-Burman, Indo-Chinese & Indonesian families of speech although none of them explains the history & origin of the terminal dental. The root even turns up in Old Egyptian *maat*, *eye*, from *mae*, *to see*, & is undoubtedly cognate with the root *mate*, *eye*, which is the general word in use among the Melanesian (but not Papuan) languages of New Guinea; while in Polynesia & Oceania the common form is *mak*, *mek* rather than *mat*, *met*. This, however, is irrelevant to discuss. The point to observe is that the Idh. root **megh-*, *to see*, produces Santali *me-t*', *eye*, & Basque *beg-i*, *beg-ut*, *eye* (which looks like the Basque & Zulu dual-form in *-i*); but Zulu *ili-alo*, *eye*, suggests a Proto-Bantu type ~~the~~ **t*-*mekh* having the neuter pronoun as a class-prefix & never as a suffix. The Proto-Zulu form ~~was~~ ^{would then be} **t*-*mekh* where Old Santali had **megh-əd*; whence Old Zulu ~~was~~ ^{was} **si-alo*, *ili-alo*. (* is the velar-labial nasal here for Idh. **qm*-, *qhu*-; hence Zulu *hi-Sant.* *me*=Basq. *ḥ*. Similarly, compare Idh. **qāq*, *qwe*, *qge*, *qge*, *ḥ*, = Sant. *meḥre*, *were* = Basq. *horts* = Zulu *alann*).

31. For Santali *t* derived from *d* may also be included the oblique-suffix *te*, *from*, *by*, *with*, Basq. *-s*, the oblique ending of nouns. The Idh. oblique suffix was *-d*, or *-əd*, which appears to be identical with the Old Latin oblique in *-d*, Skr. *-t* (Indo-Germanic *-d*). It is also used as an instrumental-ending in Santali, viz; *ete*, *te*, *by means of which* are formed nouns or adverbs. The former is clearly

connected with the verb-root *ud* (=Skr. *ud*), out, from, out of, outwards, which appears in Santali *ud-uk'*, to point out; *ud-an*, out of place; *od-ok'*, *od-oh*, to put out, go out, draw out; *on-od-oh*, an exit, place of ~~main~~ egress. The Proto-Zulu type was **ut*, out of; whence Old Zulu **us-*, *ur-* (Zulu *ul-*) which is a common verbal infix conveying the exact sense of the original root. Thus, we obtained the verbs *simb-ul-a*, to pull out, pluck from; *wund-ul-a*, pluck out, weed up; *on-a*, to become dry; *hum-a*, begin to get dry; *ham-ul-a*, to dry the outside; *any-ul-a*, to take out of water (O.Z. **emi*, water; plur. *aman*, as in *aman-ai*); *hang-ul-a*, to scorch the outside (O.Z. *hang*, to scorch = Sant. *chuka*; Skr. *chuk*, burn, scorch; Basq. *saichakildu*, to broil); *eng-ul-a*, to skim off, as cream, milk, etc; *isi-pep-o*, a gale, *pe-fum-ul-a*, to exhale, breathe out; *pep-ulu-za*, to blow out or off; *sav-ul-a*, to open out the legs or mouth; *sen-ul-a*, to turn up the soil (Idb. *'kshan*, earth); *ep-ul-a*, to take off or out of the fire (O.Z. *ep*, fire; *us*, out; Ainu ^{api} *abe*, *abe*, fire, *ush*, out, *ush-ka*, extinguish, *ush-tek*, to go out, *abe ush*, the fire is out); *dom-ul-a*, to draw out; *dud-ul-a*, drive off, expel; *vung-ul-a*, to pick out. The connection, therefore, of this Zulu infix with Ainu *ush*, out, & Sant. *ud*, *od*, out, is undoubted, the Zulu I not being primitive but derived from Old Zulu *-us-*, & ~~Basque~~ *-ur-* by rotacism.

33. Basque.	Zulu.	Basque.	Zulu.
ezaun to know	uk-wazi	zorro, big belly	isi-su
ez, z, out, from, by	(ul-, §32)	(Sant. <i>dojek'</i>)	
zini-ro, tones	luwa, bite	zen, was	-le, i-le (ide)
zorri, a louse	zeze, flea	gizon, man, man-kind	-kazi, female
Dzipo, God [?]	zimu	Jaingo, God (prob.	(Bantu <i>Mzimu</i> ,
	(Bantu -limu)	for <i>*Jaingo</i>)	<i>Mu-Janzu</i>)

It has previously been suggested that the Zulu suffix of the past tense of verbs *-le*, *-i-le*, is connected with the ancient Holarian perfect-tense suffix *-ren*, *-len*; & so far as Zulu evidence goes, this is correct. On the other hand, Bantu dialects vary between *-ile* & *-ide*, *-le*, *-de*; the inference being that the Zulu I is not primitive, or else that primitive Bantu formed the past tense in more ways than one. If the latter view be established in fact, Bantu is then in line with Holarian & Basque speech.

The Basque perfect zen, was, points to an Old Zulu perfect in -a-, while Ntutu -len or -ren points to another perfect tense in -l-, both of which are now assimilated in form. The Basque negative particle ez, not, no, appears to have been -us- in Old Zulu, but quite different from the particle -us-, -ur-, out of, from. It survives in the so-called Reversive verbs which always negative the meaning of the root; and these are very common in Kongo & other dialects but now rarely met with in Zulu. Compare land-ul-a, to reply in the negative, from landa, relate, narrate; joba, to be abashed, jab-ul-a, to be glad; nama, to stick fast to, be firmly closed upon, nam-ulul-a, to uncover, open up a lid or covering; swasa (= **hvesa*), to tie tightly, tak-ulul-a, untie, unloosen; vumba, to stop up, vumb-ulul-a, to uncor, unstopper; gqila, slave (Sant. gulan), kul-ul-a, to set free; vata, to dress, ambata, to cover with a blanket, ambh-ul-a, to undress, uncover.

Hadam,

34. The Basque word gizon, man, is the cognate to Santali ^Aman, mankind, derived from Idb. **ghm*, to be prolific (whence Santali ham-ram, prolific, which is an aromatic adjective in the superlative degree, viz., Idb. **ghm-r*, prolific, abounding in, abundant, **ghm-r-am*, most abundant). By means of the infix -d-, which forms nouns from verbs (it occurs also as -t- in *tu-tu-m*, name), we get the word ha-da-m, man, Piloum Hadam, 'little man', the native term for 'Adam'. We have elsewhere shown the wide Indonesian range of this substantive and its dental infix. That it signified originally humanity in general, & the progenitors of mankind in particular - Adam, or Hadam, male & female - is at least established by all Indo-Bantu languages. Its Santali bi-form hor means man or wife, & its Zulu cognate -kazi originally denoted both male & female; e.g. u-baba-kazi, paternal uncle, paternal aunt; u-yise-kazi, paternal uncle or aunt; um-fo, man, a fellow, um-fo-kazi, a strange fellow, stranger, um-fo-kazana, a poor sort of camp. Generally speaking, however, kazi now means woman, female, throughout the whole Bantu area, the root -tu being used exclusively for 'man'. Hence the infix, Basque gizon becomes -gin which denotes the agent, male or female; as *ikuntz-gin*, coalman; & this in Zulu is *um-ka* which can denote the husband or wife. It is always combined with one or other of the possessive particles or a common or proper noun, and is

obviously the same as -kazi (O.Z. *kasi) without the noun-infix.

55. To Id. d corresponds in Basque the voiced fricative z, & this dental is assimilated if immediately preceded by r; cf.

<u>Santali.</u>	<u>Basque.</u>	<u>Santali.</u>	<u>Basque.</u>
ade, so, then	eze, ezen	gada, gara, river	charru, torrent
adan, some	ezer, something	adreo, to bellow	arro, bellowing
ode, wet, moist	eze	kaorde, kadwa, lance	erren
oder, to put	ezorri	rehet' (= *und), root	erro
ador, fat	izor	se (= *sed), a louse	zorri
ade, silk-worm	ezi, larva	indara, a well	sintzir
adon, won	ezon	utun, name (= nudam)	izen (= *nizen)

56. A few irregularities which may be noted seem to be caused through the influence of r. When it is not assimilated, d sometimes appears instead of z which has perhaps passed through the intermediate stage of the interdental $\text{z} \rightarrow \text{d}$, e.g. Basque destatu, to see, look, behold, from O.B. *d̥rs-, (=Sant. derson, behold; Id. *d̥rk, *d̥rs); this root means specially to behold something marvellous or occult; hence, also to visit a holy shrine, —~~sk~~. Similarly, we get den-dari, tailor, Sant. dar-ji- the suffix -dari, -dari denoting the agent as -dar does in Santali, & the agent-prefix li, ili in Zulu; ^{Basq.} dama (= *d̥ma), a wager or bet, Sant. darmaha, wages, pay; draya, motel, Sant. darep. In these exceptions, the influence of r is solely responsible.

37. G. LABIAL. AFRICATES.

ID. PH = Sant. PH; Basq. P; Zulu B.

<u>Santali.</u>	<u>Zulu.</u>	<u>Santali.</u>	<u>Zulu.</u>
phal, flower	bali	phankao, to flee	balaka
phand, broad	banzi	phachak, to backbite	bacaka
phāk, space, opening	banga	phach', to drip	baca
phad, a crowd, amara	bintsi (V. /4)	phulau, to swell	bile-za
phāki, medicine	bango, charm, a pallid	phut, a kind of melon	boco, water-melon
phams, a certain one	bala, a mere	phachon, see, recognise	bona
phars, one, a-piece	person	phachia, having small	buntzu
phada-phado, flutter,	bebezela, to	attenuated buttocks	
flap, fan	flap, fan	saphar, provisions	dibi
phareb, deceit	bulu	pho-phra, rotten (fr. *phra, to rot)	boia, to rot
phedar, mutter	bodala, crowd		bolile, rotten

The root of pachon, to see, is *pha-, whence phon-ke, that which can be seen through; phopara, rotten, is a partly reduplicated form; saphar means 'provisions for a journey.' Then the journey itself journey; abi-an, on the march; O.B. *hapira). (=Basq. abialu, set out on a) In Xosa, u-dibi means provisions for a journey, the same word in Zulu signifying things that are all mixed together in confusion; ulu-dibi is the boy or attendant who carries the provisions, & (at least in Proto-Bantu times) must often have

(cf. sap-rao, to prepare, get ready)

become part of the menu. Santali saph-ar₁ comes from Idh. *saph-r, the suffix becoming sonant ₁ in ulu-dibi; hence, unless this etymology can be proved wrong, it follows that the prehistoric page-boys of very ancient times were usually eaten! (Swahili safari is a loan-word, and also Sanrali sambar; cf. Skt. kambala, provisions for a journey). The common verb bola, to pierce or bore through, which can be traced in most Bantu dialects, is cognate with Santali phor, to cut a dam, or make a breach in an embankment; hence the compound band-phora-bi₁, a snake(bing) that bores through the embankments of tanks; & bhu₁-phor, chasm, earth-hole.

38. In Basque the hard labial p is a weak consonant & comparatively rare as an initial sound in words of native origin. The common tendency is to drop it or modify it by aspiration or by softening it to b. The substitution of b for p is usual in the neighbourhood of ~~h~~ r; before l it is dropped; & in other cases, only the breathing h is left in its place.

(1) Elision of p:

hexa-paxa-lu, suddenly; puzkerro, usherro, flatulence; pesuin, besuin, lessuin, a dyke; luma, feather (Lat. pluma).

(2) Aspiration of p:

Phaulu, Paul; pherro (Span. perro); phenxa (French penser); phausa (Fr. poser); phanu (Fr. peine).

(3) Softening of p:

~~phaulu, paul; pherro, perro; phenxa, penser; phausa, poser; phanu, peine.~~ obra, work (Lat. opera); posuin, besuin, dyke; bankatu, to forgive (Lat. parcere); denbora, time (Lat. tempor-is); this change in Basque probably began about the fifth & sixth centuries, about which period it is known that p became b in Latin loan-words throughout Spain.

(4) Nasalisation of p:

parra, marra, line, limit; ipini, imini, to put, place; lipar, limar, limbar, sample, pattern.

39. Basque p = Zulu b.

Basque.	Zulu.	Basque.	Zulu.
pazi, cauldron	biza, pot	palote, shoulder-	bilati, bone
paya, fetter	bopa, bind	:bone (Sant. phari)	of forearm
epai, decree, a	abe, excuse	paleatu, fight	bula, bent
sentence		opa (= *lopa), wish	luba
pata, dregs of fruit	bidi, dress	pater, hill-side	banda
zaper, bush	shobi, thorn	pikailatzea,	beca,
pipi, wood-worm	bu-ngu, maggot	to varnish	to smear
(Sant. pich-payoh =	bebe-za, to bore	opon, fault,	shulo, evil
pipizatu, worm-eaten	holes in wood	blemia	affaires

40. Loss of p occurs in the adjective heda, broad, from G.D.

*m₁da, with sonant n as e according to rule; the Zulu cognate banzi justifies the nasal sound in the Basque & Santal words.

Another possible equation is Basque intz, dew, (izarri-)hitz, (star-)dew, with Zulu um-bête, a drop of dew, if intz is for *pintz.

41. Ido. B = Sant. In ; Basq. B ; Zulu / Y .

<u>Santali.</u>	<u>Zulu.</u>	<u>Santali.</u>	<u>Zulu.</u>
bhander, scrape, scroten	pande	bhoj, dinner	putu, a word
bhauau, to deceive	pole-ze	bhot, nodule	rust, insect
bhai-bhaise, to wait	pinini-ze	bhau, bhau, earth	pe, place
bhai-changa, spinning-top	(ditto)	bo(-bho), give	pe
bharua, strip off	pala, scrape	bair, crowd, host	pi, army
	pala-ze, vulture	bhvs, rot	puru
bhokbhokno, to gurgle	po-pe-ze	baral, cold	pola, be cold
bhubhu, spill over	pu-pu-ze	(Sk. bhā, mine)	pezi, glitter
bhubuk, bubble up		bhaga, break	pogo-ze
bhosu, pierce through	pula	sumu, a mine	tape
bhubhuru, bubble up	palala	saba, dew-claw	sipe
bhosno, anas, burst	palaze	saba (HO), drugs of	in-tai, a
bhanjan, adulterate	pinge, commit	beer	
	adultery	bhago, open up	penya
buru, head, end	pala, to end	bhai, enquire into	
bhusur-bhusur, soft	potopotu, any	baor, all; bhurti,	uku-pala,
	thing soft	whole, entire	the whole
bho-tia, a species	pi-ti, bluish	bans, suddenly,	peila, let
of antelope	pi-va, water	unexpectedly	out suddenly
bha, bhora, fear	pa, ha a bird	baia, names	mandula

43. It is curious that the Indo-Santu verb ^{to be} *bhû*, ^{to be} *bheu*, does not seem to be used independently in Kolarian, Basque & Bantu, as it is in Aryan. This is probably owing to the fact that it was not a verb but a formative root; hence the variety of uses to which it is put, according as it is inflected or added to other roots. In Zulu, as previously shown, it forms verbs from nouns or adjectives; & adopts various meanings when inflected; e.g. *pe*, at (Loc.), *p-i*, where, *p-a*, place, etc. As a preformative in Santali, it can turn nouns or adjectives into verbs, e.g. *bhoron*, shame, disgrace, *bi-bhoron*, to cause shame, to disgrace; or may be added to other roots, as in *bhumi*, *bhuî*, earth; *bhumjeu*, to live (=Zulu *penze*, to live in a strange land). The locative is frequently met with in adverbial expressions, e.g. *des bi des*, ^{one} country after ^{another} another; & the Basque cognate to this occurs as the suffix *-be* which forms nouns from adjectives (cf. *ilhun*, dark; *ilhun-be*, darkness) and archaic locatives (cf. *ahvâs*, cheek, face; *ahvs-pe*, on the face). In Zulu, therefore, it will be obvious that the locative prefix is phonetically correct even though a large number of dialects have modified it to *ha*. "Throughout the Bantu languages of the Uganda Protectorate the locative prefix is never *pe-*; with the exception of the Luganda language it is invariably *ha-*...It is an almost omnipresent feature in all the Bantu tongues round the shores of the Victoria Nyanza, on Ruwenzori, at the north end & west coast of the Indian Ocean" (Johnston's Uganda Protectorate, p. 895). The Zulu form is, nevertheless, more archaic than that of *ha-*.

43. Before o or u, or if the consonant p in Zulu is accompanied by a slight lip-rounding in the direction of pw, the labial tends to be softened. For example, in the loan-word u-saibesai from English 'sweep-sweep', the change from p to b is clearly traceable to this lip-rounding. Zulu objects to the combination pw or bw, while permitting kw, tw, gw, dw, etc. On this theory of the obsolete pw having passed into b, we may attempt to explain certain exceptions which have b in place of p; compare:

Sent. bonga, a spirit, to sacrifice to the spirits, to worship;
Zulu bonga(=O.B. *pwonga), to praise, extol, reverence, worship,
to sacrifice to the spirits of ancestors.

Sent. barea, bar, 3; Basq. bi, 3, barr-ozei, 40; Zulu bill(= *pwili), 2;
" buya, female genitals(-ldb. *bhuya); " ili-boti(= *pwoti);
" bama, to name(-ldb. *bama-); " isi-bongo, clan-name;
" bar, sun (= ldb. *bhar-); Basq. bera, not; " balela, to
shine hotly on the sun;
" buluu, a method of exorcism; Basq. birumana, sorcery;
" Zulu bula, to divine, consult a witch-doctor;
" bode, a male goat; Basq. biti-lm, a kid; Zulu im-buzi, goat;
" bindu, a bundle, bandh; en iron band; bando, to bind;
bandhon, to bind, a bond, contract; bandhak, to bind with a
pledge, to mortgage; (all from the ldb. root *bhendh-, to tie);
Basq. badi, badi(=O.B. *badi), a pledge; madi-tore, a little
knot(=O.B. *bandi-); lit. "something small that is tied";
Zulu ili-pande, a bundle of things tied together; isi-pande-ko,
a short rein or rope for tying the hindlegs of cattle;
banda-kanya, to bind together, from O.B. *pwanda, *pwata,
to tie, bind.
" bhatthi (ldb. *bhatti), a boiler; bheta, a furnace, kiln(ldb.
*bhatta, from ldb. *bher, bhr, to boil); bharea, to be
possessed by a spirit; Basq. berta, pertz, a boiler;
Zulu bile, to boil(=O.B. *pwila);
" gaba-in, pregnant(ldb. *gabh-, *gibh-, navel, belly, womb;
Skr. garbha, womb); Basq. sailbor, navel; Zulu um-baba, a big
hanging belly; in-kaba, navel, Suto kaba, Sana. ki-tova,
Mango ukamba, Lu-Kangi, li-kele ntolu (=O.B. *pwaba, navel);
skin to ulu-ilebo, race, tribe, clan, the relationship or
clan-relationship through the mother.

44. Basque b = Zulu p.

Basque.		Basque.	Zulu.
bigua foolish	pukaga, idiot	bultatu, sprout	pumpu
(Sent. buechua, fool)	zafiti	buru, head, end	pela, end
foolish)	poko, fool	(bu-bu, bur-dax, end)	
burdatu, fold, turn	pendula, turn	-ba, st, on(locative)	pa-, st, on
beck		bicas, foam, froth	pukupu
balaku, flattery	poloza, deceive	bi, two	bill
	by lying	obi, nest(ldb. *ugba,	(ambo, weave),
borretu, scrape	pala	to weave)	ambo, a quiver
bukaur, coat	in-pango	biti-ka, a kid	im-buzi

45. Vocalization of B in Basque.

ashe, abe (=O.B. *babe), breast; Zulu pepo, wind;
outzi (=O.B. *beuzi), to cleave, break; from ldb. *bhetda, to
bite, cleave, split; Zulu banda, cleave(O.B. *pwaba, pwanda);
urki, birch-tree(O.B. *burki; Skr. bhurjas), a species of birch);
compare also labe, lauso, short-sighted; otiti, subtle.

46. Parasitic B occasionally appears after intervocalic H, just as parasitic D appears after H; cf. *Kambara*, ~~room~~, from Latin *camere*.

47. Palatalisation of labials in Zulu.

Owing to the circumstance that palatal *sh* in Zulu may represent a large variety of sounds, guttural, dental & labial, only a few equations will be given to show that hard *sh* in Zulu sometimes corresponds to Indicantu B, BH, $\beta(u)$. The etymologies are tentative but an endeavour may be made to trace *sh* to Old Zulu ~~sh~~ *wi*, *fi*(=Idb.B); *pi*(=Idb.BH); *phi*(=Idb. β or u).
IDB. B, BH = Sant. B, BH; Zulu *sh*(from *wi* & *pi*).

Santali.	Zulu.	Santali.	Zulu.
<i>chubuch'</i> , to prick	<i>gushu</i> , (O.Z. $\chi u f i u$)	<i>baumbri</i> , pimple	<i>ili-anashazi</i>
<i>baasam</i> , to burn (Skr. <i>bhas</i>)	<i>sha</i> , burn;	<i>kambair</i> , settle, reside	<i>qoshwan</i>
<i>beron</i> , forbid, tabu	<i>sheze</i> , scorch	<i>bēt</i> , share, portion	<i>shezi</i>
<i>bankao</i> , to wander	<i>shala-za</i>	<i>banok'</i> , head	<i>un-shashu, shangu</i> , head, van, front
<i>bagileave</i> , abandon	<i>shanga</i>	<i>bala</i> , new, fresh, young	<i>she</i> (Swan. <i>eye</i>)
<i>burua'</i> , bury, to	<i>shiya</i>	(Skr. <i>bāla</i> , Basq. <i>barri</i>)	
<i>slide out</i> , slip out	<i>shelele</i>	<i>burufj</i> , a tower	<i>tshilo</i> , to tower
<i>burhu</i> , twist, wind (Basq. <i>bilhakatu</i>)	<i>sawila</i> , curi, twist	<i>buru</i> , hill, mountain	<i>es</i> <i>hill</i> , castle or tower
<i>bader</i> , budur, to rotte	<i>savasa</i> , rustle	(Idb. <i>bru</i> , speak); <i>beli</i> , <i>buli</i> , language	<i>sho</i> , say;
		<i>bel-e</i> , so they say	<i>shole</i> , say for <i>ano-no</i> , say thou! just so, that's it

48. Idb. β or u = O. Zulu *phi*, Zulu *sh*.

Santali *uam*, to submerge, sink in water, go under (Old Santali **ynam*); Zulu *shona* (=O.Z. **phiona*), sink, submerge, go out of sight; with β for u in Santali, compare examples above quoted such as: *burhu*, to wind twine into a rope, from Idb. *uel*, *uelq*, *uel s*, to turn, to wind: *burua'*, to slip through, off, out or away; also, to withdraw, to desert, from Idb. **yerq*, *yelq*, *ureq*, *yleq*, to withdraw, draw out, slip out. A few other examples are Zulu *she*, to be absent, wanting, empty, from Idb. **ue*, empty, or **yen*, empty, void, without (= Sant. *bin*, *bina*, without; Basq. *bi*, without, as in *bi-pil*, without hair, plucked of its hair or feathers); *ulu-shi-shi*, an endless or continuous action, as of walking: *umu-shwa*, a stripe, line (Idb. **yel*, to roll on, flow; Sant. *buhel*, to float, flow; Sanskr. *val*, roll, *vala-las*, a procession; Basq. *aul-ki*, a funeral procession); Idb. **yen*, to like, love; whence Basq. *uni*, on, good, on-irritzi, to love; Zulu *um-sha*, sweetheart; *un-shana*, *u-mi-sha*, *u-mi-shana*, a pet name for a child.

49. Basque *barri*, new, evidently comes from an earlier type **bel-ri*, but the labial is fricative β (=Sant. *bale*); in Old Iberian dialect it was *barri* or *βerri*, as seen from the old Basque village-name *ili-barria*(Basq. *Iriberry*), "new village". Fricative *w* occurs in the word *haitz*, sits, a rock; whence the diminutive *barri*, stone(=was-ri). Palatalised in Zulu, this becomes *ili-tshe*, a rock, stone(O.Z. **uzhe*, with prefix -ri), & related to Suto *le-vane*, Haranga *i-bye*, Tswana *le-vane*.

bisho. The Proto-Zulu form was something like *ri-beda & the Proto-Bantu type *ri-p'et'a. (The nearest modern Indonesian prefixed cognate to this is Eromangan ni-vat, stone, rock; the other dialects use a suffix or none at all; e.g. the Melanesian root vato (from vat'o) is vato, stone, rock, stone idol, in Malagasy, Malay batu, & vatu, varu, etc., in many other Indonesian tongues; but in the Roro (Melanesian) dialect of New Guinea, the suffix reappears in pita-ra, rock, stone). From this circumstance one may infer that the ~~Proto-~~ Proto-Zulu root *beda must have produced an archaic Old Zulu type *uez, which afterwards became *uze, through a slight transposition of the sound. Finally, this later form would be regarded as u palatalised to uzh, although Bantu dialects are not agreed that the initial labial was ever palatalised. Meinhof thinks that the Bantu type is *uwe, but there is no doubt that dialects differ over the presence of a sibilant in the root which succeeded the dental sonant ~~that~~ that labio-dentalised initial u-consonant. Zulu ili-tshe & Basque harri, stone, siltz, haiz, rock, are thus seen to be the same, the Zulu prefix li-, ri- appearing as the suffix -ri in Basque. The original Kolarian type was *pet-ra, a rock, stone, which has now changed to beda, the initial sound being softened & the loss of r causing the cerebralising of t. Otherwise, we may have to suppose that beda (which is an archaism of speech only used in the phrase sasan beda, a "standing-stone" or monolith), was borrowed in prehistoric times from some dialect which had this word beda for stone or rock. It was not a Proto-Zulu dialect, since the cerebral dental indicates the presence of a neighbouring l or r, hence beda had a suffix in -ra corresponding to -ri in Basque. It is a well-known fact that all over Bengal are to be found these great cyclopean structures, stone-circles, dolmens, & monoliths which are attributed to the ancestors of the Kolarian race. Their significance & purpose have been explained in my "Elements of Negro Religion"; here, it is relevant only to remark that Sasan Beda is a place mentioned in old Santal traditions, & received its name from being the "place of the Standing Stone". The Indo-Bantu name for the monolith or ancestral pillar of remembrance was *pet-ra, & has evidently been used in this sense by the Basques & Bantu from time immemorial. The root is of Indonesian origin, & everywhere,

is associated with stones, monoliths, idols, & the worship of ancestors. It is, therefore, quite probable that the antiquity of stone-circles & such-like cyclopean structures of stone dates back for 25, 000 years,—that is to say, since the period when the ancestors of the whole Indo-Bantu race lived in some Indonesian island.

50.

D.

DENTALASPIRATES.

IdB. TH = Sant. th; Basque t; Zulu d.

<u>Santali.</u>	<u>Zulu.</u>	<u>Santali.</u>	<u>Zulu.</u>
thāi, thāo, a place	da-wo	than, bottom	dumu, fundament
tharao, be tired	dans	thip, valley	dambo
thorio, old, feeble	dala	chithi, letter, sign	owadi, sign, mark
tilha, knoll, mound	duli	gotha, dung	huda
tan, shoot with a gun	du-bula	(Srr. kunth, to blunt)	qunteke
thal, make, build	dala	thamko, decrease	dinga, led
thasak, stir, excite	duda	katamau, to be	godola
thali, sink (as in mud or in a bog)	da-be, mud	chilled with cold	
thōrē, anklebone	da-be, bog	thela, to become	di, to act with indifference
kāth, black with dirt	denda, heel	callous	
thot-ma, snout	tsade, seat	ther, to thunder	duma, thunder
	devu, snout	thasao, to be near	e-duma, near

51. By palatalisation with i, Zulu d passes into z and Santali th into sh; whence thapar, to tap or hit slightly; Zulu tsawibila, to deal a slight stroke, or clap gently; Sant. tayo, tayo, to clap the hands, Zulu tsaya, Xoss tyaya; Sant. taye, taye, slow; tande, jan-de, anyhow, Zulu tsan-mu, tsan-me, as though, just as if.

<u>Basque.</u>	<u>Zulu.</u>	<u>Basque.</u>	<u>Zulu.</u>
ketu, quantity	gede, bulk	gutaun, book (orig. 'sign, mark')	owadi, mark, symbol
tei, tegi, a place	dawo	tute, tingle (of ears)	huda, excite
-tan, place, to (Sant. than, to, place infinitive)	-da, to (an infinitive)	thoilla, whale, or a very large fish	(?dōlo, a huge mass)
tiura, turn of, turned	duma	tanta, a drop	denda, paleon
tutur, summit	dundu		

52. Basque thoilla is the name of some very big fish which seems to have anciently signified the whale. The Basques have so long been acquainted with whale-fishing ^{ir} in the Atlantic that it is hard to explain why they should take the native word in favour of the Latin baleine (Basq. balce). If thoilla (Labourdin), tolle (Guipuzcoan) was the ancient name, it was certainly derived from a root meaning oil, & cognate to Santali tel, oil: (Wongo tele, whale). Hence, it is unlikely that Zulu dōlo is related to these words.

Initial t is comparatively rare in Basque & it is easily dropped; e.g. alote, ate, duck (=O.E. *ate), Zulu ill-dada, black duck. The former has been influenced by Latin anat-em but a native word undoubtedly existed.

By lip-rounding the consonant may be softened to d; as in *dauzin*, near(=O.Z. **twak*in, **(wa)h*); *dee-lei*, squint-eyed(=O.Z. **twesli*): *Zulu ili-duze*, a place near at hand; *e-duze*, *em-duze*, near (O.Z. *duz-s*, to be near, with locatives in *-ma* & *ḡ-ma*): Santali *thək'*, near(Aim. *tek*), *thaseo*, to put close together, *thasa*, close together, *thas-re*, squint-eyed. In the neighbourhood of liquids & nasals, d for t is not infrequent in Basque; hence are obtained *tegi*, house, *ehun-degi*, a weaving shed; *apel-du*, to stoop(= *apal*, humble, +*tu*). Initial l for t probably occurs in the word *lerre*, line, row, rank: Sant. *thar*, line, row; *thar-a thar*, *thar-ke thar*, in lines or rows; *Zulu ili-dōlo*, *ulu-dōlo*, a long line or row.

53. IDB. DH = Sant. *dh*; Basq. *d*; Zulu *t*.

Santali.	Zulu.	Santali.	Zulu.
<i>dherao</i> , to pour	<i>tale</i>	<i>dhon</i> , goods, property	<i>te</i> , thing
<i>dherao</i> , cut by force	<i>tala</i>	<i>dhona</i> , a piece of meat	<i>tebe</i> , a piece
<i>dherao</i> , to own	<i>tala</i> , tax	a piece of meat	of fat
<i>dhurisu</i> , heal sores	<i>tala</i>	<i>dhanteo</i> , rebuke	<i>tetiso</i> , scold
<i>dhoso</i> , to carry	<i>two-la</i>	<i>dhanda</i> , to bless	(<i>tādo</i> , <i>uṣṭay</i>)
<i>dhuri</i> (Skr. <i>dhuli</i>), dust	<i>tuli</i>	<i>bisau</i> , test (Idb. <i>bhaish</i>)	<i>pata</i>
<i>daunbe</i> , clump, ball	<i>tumbu</i> , core	<i>adha</i> , half	<i>āta</i> , to halve
<i>dash</i> , <i>dashan</i> , pit, hole	<i>twa</i>	<i>dhithao</i> , provoke	<i>tinta</i>
<i>dashal</i> , snake	<i>taka</i>	a quarrel	provoke
<i>da</i> , body (Idb. * <i>dhafgh</i>)	<i>timba</i>	<i>dhugis</i> , smoke	<i>tunga</i> , to smoke
<i>poro-dan</i> , chief man	<i>tu</i> , man	<i>mun-dug</i> , tree-stump	<i>unt-ti</i> , tree
<i>Mun-da</i> , 'man', Kolarian	<i>Umun-tu</i>	(Skr. <i>dhany</i> , send)	<i>tun</i>
<i>dhugray</i> , abuse, scold	<i>tuka</i> , call	<i>bhāṣa</i> , incense	<i>tuta</i> , smoke;
	bad names	(Idb. <i>dhyes</i> , breathe, give off vapour)	<i>tuta</i> , <i>tunzi</i> , chest, spirit

54. Sometimes DH in Santali loses its dental sound but this is more peculiar of loan-words; e.g. *bakra*, deer, Skr. *badhira*, *Zulu isi-puta*, a deaf person; *dane*, Skr. *dadhī*, udder; *behu*, Skr. *vedhū*, wife, Basq. *ohaide*, concubine; perhaps also *Zulu un-ḡazi*, wife (not related to *-kazi*, female), if from O.Z. **pfati* < **phati*.

55. Through the influence of *ḡ* which causes palatalisation of *dh* to *ḡa* & *t* to *sa*, or else *s* by incomplete assimilation, Indo-Bantu *dh* may be represented by these secondary sounds; eg. Idb. **dhî*, *dhei*, to think, perceive; Skr. *dhî*, *dhyaî*, think; Sant. *chi* (for **ḡhi*), to say, think, *chi bāḡ*, to say no, deny; *Zulu uku-ti*, to say, think, *te-ta*, "speak big", to speak the praises of the ancestral spirits; *te-sa*, "speak down", to disparage; *ji-basa*, disparage, speak contemptuously of; *ji-gida*, speak abusively or angrily.

With *s* for *ti* in Zulu compare *ulu-suku*, day (=O.Z. **tiuku*) which is derived from a root meaning "to be hot"; thus, Sant. *daseo*,

to burn (Idb. *dneḡa), Sur. dah, burn, be hot; Basq. Degen-ii, August, the "hot month"; haza-teguni, Shrove-day, from azagi, flesh, *degun, day; sor-tegun, birthday, from sor, to be borne (Zulu sala, to beget); egun, day, apparently for G. B. *degun, with loss of initial d.

With z for di in Basque, compare Idb. *dnel, to be flat, level; whence Basq. zel-ai, a plain, valley; Zulu tā, O.E. *tal, to be flat, level, smooth, ili-tafo, O.E. *tal-wia, a plain; Sant. dhal-ia, dhal-pa, broad.

56. Before y Santali dh may interchange with bh or b, Basq. d with b, & Zulu t with f through the intermediate stage of tf which is here even in Bantu dialects. Thus, Mun-dun, a Munda or Pol, poro-dnan, a chief man, from Idb. *dhyan, a man; Zulu umu-tu, a man, um-fo, a man, um-fane, boy (-fo-iane); Basq. -dun, man, a suffix which signifies the person or agent, e.g. Buskal-dun, a Basque native; Idb. *dhnes, to breathe, emit vapour or exhalation of any kind; whence Sant. dhuan, dhā, smoke, incense; Zulu tufu, a ghost, tufu, smoke, ili-fu, a cloud, ama-fufufu, clouds.

57. Initial d in Santali often appears for dh, as in dahao, to burn. The rule is that when the root contains an aspirated consonant both initial & medial, the initial sound is deaspirated. When the nasal is used before dh medial, however, the aspirate character of the sound is dropped, e.g. andwar, udier, with u vocalised, for Idb. *udhyer; whence also arrape, test, udier, from O.E. *edra-pe.

58. Basque D = Zulu T.

Basque.	Zulu.	Basque.	Zulu.
dako, trough	tunze, veil	erdi, half	ata, halve (-rta)
dala, a sink	tala, basket	edan (-den), drink	nata
dei-tu, call, summon	ta	ede-ki, take away	et-ula, take off
dona, goods	to, thing	hidu, hire, thrus	itatu
deus, something	to, um-ti, thing	idi, bullock, buffalo	ay-ati
-dun, man	umun-tu	ude, summer	ota, to warn

59. Initial d is easily lost & its former use can then only be discovered by the etymology of roots. Compare dasenkusa, easikusa, an excuse; egun for *degun, day; higi for *degi, to shake (Zulu take). When medial, it may be dropped through syllabic contraction, as in zaldun horseman, from zaldi-dun, horse-man; zaltoki, a saddle, from zaldi-toki; sudur, snout, nose; atsedan, atseen, to exclaim; aba-dune, aba-une, occasion, opportunity.

60. Parasitic d occasionally intrudes itself after medial n : as in endrezera, footpath, -from on, foot, -re, of, 'zero(oss.), a path(=Zulu in-dalela; Sent. aoran); mendi, mountain, from O.E. 'moni, mountain, of which the diminutive is munio, a hill; arno, ardeo, ~~(=arido)~~, vine, the word being probably cognate to Sanskrit *vârûṇā*, palm-wine; Zemendi, November, from O.E. *Samani, the "end" of the Neolithic year when the crops were gathered in & the remembrance of ancestors was celebrated on All Souls' day. From Old Basque is borrowed Goulisi Samoni-osa, whence is derived the Gaelic name Samuinn, November, the "end" of summer, as it has always been supposed to mean. In the Nounde dialect its cognate ^{autumn;} seems to be ku-samano, ~~(=samano)~~ there is no corresponding name in Zulu for the month of the dead, but the original form of the root survives in Gantseli samû, end, sum-er, to end, complete. The parasitic nature of d after n in Basque Zemendi seems, therefore, to be fairly established by the etymology of the word.

61. D is hardened to t before or after s or z; ikas-i, to learn, ikas-tun, an apprentice; hitz, word, hitz-tun, orator; itzar, an old bull, from idi, bull, zar, old; artzar, an old ewe, from ardi, ewe, zar, old. When intervocalic, d frequently passes into r which has often a peculiar pronunciation like a dental; e.g. idaki, iraki, to open; ipidis, ibiris, ibis, a ford; icheden, ichoron, echaen, to hope; edaki, araki, a faggot; aidur, airur, three. Before or after r, the dental may be wholly assimilated; as in burdun-zale, burrun-zale, an iron spoon; leurdan, laurren, fourth; berritu, to scatter, from Idb. *uerda, speak; errape, test, udder, from Idb. *udhyæ'r; kaidere, casir, for *kaiderra (Lat. cathedra). Soft l for d is met with in khardo, kario, thistle; adur, elur, elhur, snow.

62.

3. SPIRANTS.

E. LABIAL SPIRANTS.

According to phonetic law, spirants should be represented in Basque & Zulu by aspirates which in neither language can be said to exist although both have the sounds bh, th, ph. The disappearance of the old sounds may be explained as due to the early change of aspirates to affricates such as happened in Aryan tongues, viz., kh, th, ph; gh, dh, bh, into *ç*, ts or tʃ, pf; *ʒ*, ds or dz, bv or v.

63. Idib. W = Sant. w (h, or y); Basq. ph, p; Zulu b, v (O.Z. bu-bv). Before the dental sonants s or t, w was pronounced with a slight labio-dental affection, the nearest approximation to the original sound being probably the Ainu f which is always aspirated like fh or else the Greek Digamma Ϝ . The Greek symbol is here adopted to represent Idib. w as a labio-dental & cannot be identified with f as pronounced in English or Zulu.

<u>Santali.</u>	<u>Zulu.</u>	<u>Santali.</u>	<u>Zulu.</u>
chewak, to chop	cuba	hahara, to wonder at	ba-ba-za
hewa, accustom	kuba	guhun, wheat	jiba, Hafir corn
kwel, wriggle	tshubulaza	daha, deep pool	ziba
chaho, perhaps	ngabe	luhai, sand	hlabati
hawu, cholera	kobe	iri, millet (=wiri)	amo-bele
hā-hā, hē-hē, yes	ye-bo	(Skr. vadh, strike)	bete
loher, to delay	libala	(" var-na, colour)	bala (Kar. yava)
hatar, scrape	baza	(" vera, body)	bili
hathauri, hammer	bazo	(" vas, to wear)	vata, am-bata
(orig. "sambar") hatchet	hatchet	(" shava, ear)	dhleba

64. Zulu v for bv, y.

Sant. khawao, to commandise, Zulu geva, to eat raw, ili-gova, glutten;
 " aro (=fres), to clothe, " vata, to put on clothes (=vata);
 (Skr. vri, to close, " vata, to close.
 " vari, water, rain, " vula, rain.

65. With palatalisation by j.

Idib. fem, to vomit, spew; Skr. vam, spit out; Zulu tshuma, spit out;
 Sant. muhut, become sour (=nwu-d), Zulu tshu, sour beer.

66. Combined with liquids, the hard spirant w or else the liquid is dropped. When both are preserved the indeterminate a-vowel is inserted between them. Hence are obtained bi-forms like rohi, beroh, colour (Skr. varna); ruk, biruk, tree (Skr. vriksha); The absence of Ϝ causes the interchange between w & ph or p, the latter being all that remains of the lost digamma; thus, achel, pachel, wealth, abundance; ocher, potaor, tired; tupuri, ruhuri, lean, emaciated (Zulu dwaba); gapo, gayo, peckless; hare-phare, quickly (Zulu ulu-belo, rest, swiftness); ocher, pachor, a walled enclosure (Zulu isi-baya, cattle-fold); here-phare, time & again (Zulu bele-bela, to dun a person, bele, constantly, un-belebele, a never-ending affair); Hihiri-Pipihri, Hihiri-Pipiri, Paradise.

<u>Basque.</u>	<u>Zulu.</u>	<u>Basque.</u>	<u>Zulu.</u>
zapo, minnow, tadpole	shobi-shobi	erreh (=fren-), bowels	bilini
lapitz, clay	hlabati	tapatu, to cram, stuff	ziba
ereki, chop, hew	cuba	(Sant. tuwet, tunet)	
potzuak, genitals	boti	chupa, jacket	jobo, "affairs"
sum-pur, tree-stump	bili		taille
Ope, cake, bread	jiba, corn	phulo, heap, pile	isi-wiva-ne

68. For the interchange of Basque *p* with *f*, for *pf* or *ph*, compare *alper*, *alfer*, idle lazy (= O.B. **pfler*), which seem related to Santali *buru*, *luru*, idle, lazy, & Zulu *ubu-vila*, laziness (= O.Z. **bvila*, *Sanh.* *vivu*, lazy). But the aspirate *ph* or its affricate *pf* is very often dropped, leaving no trace of its presence except in the case of reduplicated roots. Thus are obtained:

Basq. *hstu*, to clothe, dress (Zulu *vata*); *auri*, rain (Zulu *vula*);
 " *haka-paka-ka*, suddenly (Sant. *achok*, *achka*, suddenly, *hach*;
pochoo, to hurry, hostile); *puzkerre*, *uzkerre*, flatulence
 (Sant. *padna*, flatulent); *ahulki*, a funeral (O.B. **pfaluki*),
 Skr. *valaka*, a procession; Basq. *achal*, bark, skin, Skr. *vakala*,
 inner bark of a tree.

The presence of liquids tends to soften the labial; hence the
bi-formas pesuin, *lesuin*, *besuin* (O.B. **pfles-*), a dyke; Zulu *vala*,
 to close, *isi-valala*, a trap, cage.

69. Spirant *w* and *y* may be vocalised & so disappear in one language but remain stable in another. Compare:

Sant. *khaya*, *khafa*, piece, part; Zulu *gaba*, piece, part, *gama-nxa*,
 a half.
 " *ghōea* (= *ghōwa*), minnow, tadpole; " *shobishobi* (O.Z. **shobvi*);
 " *haiar*, a pointed piece of wood or bamboo used for digging
 up roots, etc.; Zulu *ili-luba*, hoe;
 " *lutur*, ear, from a *lur* root *lur*, to hear, listen, which
 comes from **leys*, earlier **kley-s*; whence *lutur* is
 formed by aid of the dental infix *t*, as in *hu-tu-m*,
 name, from *hum*, to name; Zulu *dhlebe*, ear (O.Z. *Zhlebe*).
 But original *w* vocalised in both occurs in Santali
tuvel, *tuhel*, unconscious (Idb. *tuvel* = **qelis-l-*, *qvelis-*;
 whence also Zulu *isi-awati*, unconsciousness (= *yveti*);
 Basq. *hende-llo*, thoughtless, careless.

70. Before *a* or *e*, *w* easily passes into *y*; hence such variants as:
chadwai, *chadua*, a divorced man; *chuwa*, *chua*, to distil, *chaoao*,
 to ferment. It seems that the root *chuwa* was originally employed as
 a classifier before words signifying native beers or liquors which
 were distilled from rice, sugar-cane, roots, etc., & this primitive
 usage is still in vogue among the Kachins of Burmah. Their name
 for 'beer' is *chyō-ru* which is identical with the Zulu abstract
 noun *ubu-tshwa-la*, beer ("distilled liquor"), the Zulu & Santal
 forms alike showing *w*-sonant ~~as~~ as well as palatalisation of
 the initial guttural. This is clearer in dialect as shown by
 Pedi *yzi-ala*, *yzi-ahwa*, beer; beside Kongo *ngw-ala*, brandy;
 Nvunda *u-ala*, maize-wine. Meinof thinks the Bantu type is **yalwa*,
 but Zulu points to a type **zhw-ala*, "distilled liquor", the initial
 sound being palatal & not velar.

71. The combination of the nasal with *w* produces *m*, which is a compound sound either as labial nasal or labio-velar nasal. A further change of *m* to *ny* is caused by a succeeding *i*, but *ny* is not employed as a Kolarian consonant although it is common in Thibeto-Burman & Indo-Chinese as well as Basque & Bantu. Thus, the change of *w* to *m* seems to occur in the bi-forms *kaptao*, *khamtao*, *khamchao*, to catch, seize (Zulu *bamba*); *hupana*, *huncha*, quickly; *jhap*, *jham*, together; the *p* originally being the hard spirant *w* or the digamma *f* which has been strengthened by the nasal. When, therefore, the original labial fricative could scarcely be distinguished from *w* sonant, we may find that one language differs from another according as they regarded original *w* as sonant or consonant. When the former is intended, Santali, Basque & Zulu have *M*, but in the latter case the laws of sound-change operate. Compare:

Santali *ghamaota*, to toil; Zulu *sebenza* (Hlén. *nkabenza*, *yimbhela*):
 " *marao*, to kill, *mor-na*, death; Zulu *bulala*, kill;
 " *meskok'*, *meskoca'*, to smile; " *bozo-zela* (= *bobio*-, *yoyo*-)
 " *moloh*, forehead (Basq. *belar*); " *i-bunai*;
 " *miau*, *meh*, a calf, bullock; " *buxu*;
 " *muca*, an ant (Basq. *mun-aux*, ant-heap); Zulu *qabau*, ant.

72. When Santali *w* is treated as sonant in the Basque & Kolar groups, it is strengthened to *M* in both; e.g.

Basque *maillegatu*, to borrow (Sant. *molao*, to give property or goods in payment of a debt); *malbe*, O.B. **merui*, weak, feeble, (Sant. *pare*, old, *marcho*, to lose vigour); *mana*, to order, *manu*, commandment (Sant. *maha*, warn, *manan*, to vow, *manadi*, preach); *andi-mandi*, *magastas*, *toffs*, *andans*, a big crowd (Sant. *andel*: *mandel*, *ander-mander*, in large numbers, filling a large space; *andels*, *achel*, *pachel*, rich, wealthy, *mander*, multitude, *mandines*, rich, corpulent. Connected with the same root is the name *Mando Sin*, a legendary Santal chief of prehistoric times & Basque *Andela*, also a name of some forgotten grandeel; *manmar*, spider (Sant. *manmar*, a species of large & poisonous centipede, from *mar*, to kill); *maseta*, mallet (Sant. *mak'*, *mañ*, to hack, chop); *maslar*, worthless, cheap (Sant. *micha*, in vain, trifling); *miru*, a kite, —supposed to come from Latin *milvus* but compare Sant. *miru*, a parakeet; *mola*, heap, pile, *mulko*, heap, *mulo*, rising ground (Sant. *mul*, chief, principal, an eminence); *mol*, wine (Sant. *meru*, malted grain before & after the liquor has been extracted); *mendein*, pole, a ploughbeam (Sant. *mondhaseni*, a spittle or stirrer for churning); *Mordeisiri*! *Monsieur*! (Sant. *Marde*, a title of address used by brothers-in-law; the root is found in *murwad*, to respect, honour, *mor-jad*, to show respect); *mora*, blue, Sant. *murum* (obs.), blue, as in *murum jel*, the Nil gee or blue cow, *murum ot*, an edible *musaroca* which is *tsbu* to the *MURUM* sept of the Santals who take their name from this particular blue fungus); *morosko*, brown, (Sant. *molso*, greyish); *merroin*, boy, lad (Sant. *merach'*, a brat); *muchiadu*, to be tired (Sant. *mokoh*, to tire, to be done up); *murgil*, mixture (Sant. *murgan*, drugs or medicines in general); *mutchitu*, to be mouldy (Sant. *mids*, be mouldy, *monda*, to go bad); *muzika*, derision, mockery (Sant. *monj*, to ridicule, mock); *ma*, *mun*, *muñ*, to kiss, related to *moko*, beak, *muthur*, *masu*, snout, *mutin*, pouring the mouth (Sant. *mũ*, nose; Idö. **muk*-). The etymology of this word points to the Indonesian custom of kissing by rubbing noses.

73. Santali m = Zulu m.

Santali.	Zulu.	Santali.	Zulu.
mo, swell, be swollen	mita, be pregnant	ganso, dango, honour (Idb. *gaim-a-ai)	ganu, nane (prefix mu-)
mohgon, be astonished	manjala	man', core, pita	mōngo, pith, marrow
mohō, to sprout	mila, tumour	mayam, blood, bleed	banlowa, marrow
maigo, palm-cat	mango-be	mek'mek', blest	mōpho, bloodshed
mak', mah, cut, slash	menge	(Bang. hamar, 10)	maka (obs.) blest
meskok', to smile	mama-taka	mit', one	u-neke, root
mahear-mohgor, mumble when eating (as one without teeth)	bozo-zela	melet', lick, pro-	shuni
	munga-munga	(Bang. milonta, lick)	nye
	mumble, speak in muffled tones		nyaliza

74.

It was previously mentioned that Bantu has lost the Indo-Bantu word for 'iron' & adopted a root that runs through the Dravidian languages. It is possible, however, that the Idb. word *fersom or *fersed, iron, may yet be traced in Bantu dialect either in a primitive or secondary sense. The Santal name for the mineral is mēhēt', Ho narhan, Bhamij mere, & these are all cognate to Basque burdin, burni, iron. The only apparent root ^{in Zulu} which conjecture leads us to regard as possibly akin to these, is the word ili-nyēla, ili-nyēlo, the dross of iron in the smelting, which seems ^{to be} unconnected with nyēla, to evacuate the bowels. The idea latent in the original root is "to work, to mine", which appears in Zulu nyā, to do a thing completely, be finished entirely, but quite different from nym, evacuate the bowels. Compensatory lengthening of the root-vowel also suggests the loss of a root-consonant, & the form of the prefix points to an Idb. neuter noun-suffix -d (=Sant. -t'), whereas Basque burdin points to the same root with terminal -n (Ho, Munderi mēra-en). If this Zulu equation be correct, although it is conjectural as its history in dialect is difficult to trace, the Old Zulu form would seem to have been ili-mierz-o (=Idb. neuter inanimate in -d) & ili-mierz-a, now ili-nyēl-a (=Idb. neuter inanimate ending in -a).

75. Of other examples in Zulu where Idb. w appears as ny before ^{nasalised} i, a few more may be submitted.

- Zulu i-nyama (O.L. *njam-); flesh, meat; cf. Skr. mahso (Idb. *men-sron);
 " ili-nyikwa, a lazy-bones; Sant. nokon, to tire, be tired out;
 " nyangala, to lead a lazy indolent life (Basq. muchindu);
 " umu-nyu, pity, compassion; Sant. maye, pity, to show mercy;
 " nyonya, be sad, downcast; " momoyot', dejected, sorrowful;
 " isi-nyela (Natal), spot, defect; Sant. mari, spotted, a pock or pustule; mari bace, cholera; mari guti, smallpox;
 " margaitha, dirty, soiled; Basq. warro-ka, wart, pustule (lit. "a little spot"); murika, blear-eyed.
 " nyolula, Xosa nyolula, to draw out, squeeze out, um-nyolula, the slough squeezed out of a tumour or pustule; akin to the root in Sant. mardao, rub, knead, squeeze out, Skr. mrid;

to press, crush, squeeze, wridge, wridge, grapes; Basq. mardo, mordi, a bunch of grapes, ma-mordi, a bunch of grapes; lit. "that which is squeezed or crushed".

Zulu nyankato, to scowl; Basq. natin, putting the mouth; nye-pe, to be damp or moist, nyekambise, moisten, un-nyeko, year, "wet season", i-nyekato, north-east wind; Basq. negu, winter; Sant. moho, damp, wet, moist; mo-ec, to moisten, damp or wet. The Idh. root is *negh-, to be moist or damp; hence Zulu *nyeka-, the rainy season, *nyeka-te, the prevailing wind of the rainy season, viz., north-east. It is curious that in old Egyptian this word appears as Mohit, north wind, while Mohit means North in the Book of the Dead, the name for the north-easter being obviously Indonesian in origin. Reason to these distinct families of speech. Zulu Nyankato is not an Egyptian loan-word but the modern form of the old Indo-Bantu word *Megh-ad, the wet north-east wind of the Far East.

Whether Basque okil, the north-east wind, should be equated with Zulu nyankato is difficult to say because the initial sound has been dropped, & its history is very obscure. If, however, okil is not easily traced in Idh. speech, the same cannot be said of its Indonesian origin & affinities, for it is the genuine Indonesian name for the north-easter throughout the Polynesian islands (cf. Santo, Efate tokelau, north-east wind; Tokelau Futuna, Tonga, Niue tokelau, north wind; Mangrove tokelau; Marquesas tokelau, north or north-east wind; Tahiti toerou, a nor'-wester; Rapanui tokelau, etc.) The history of the Indonesian root we do not know, but Basque okil (= *tokil) betrays such close affinities with it in form & meaning that its relationship to Zulu nyankato is very improbable.

76. Idh. β or u = Sant. (or b); Basq. ba (then v, then b, v); Zulu pa (then pf, then p, f).

Santali.	Zulu.	Santali.	Zulu.
mayam, blood, bleed	mōmo	banij, to trade,	funise, to buy
bassi, heredity	ulu-fuze	bani, payment	or sell
bahel, haul-kau, fleet	fule, river	hanga, bank, cave,	face, farm,
aine, unless (Skr. vira)	fum	hole, chain	buyind!
banot, agree	fame, be like	bol, strong, bol-man,	u-folo-ba, one
bas, stench (Skr. vase)	futo	well-developed	strongly built
butu, to tareb	fute	beiger-ak', black	finger, darkness,
bueak', toATCH	fukama	Bahro (Skr. vāra),	fi-pe, to be
bedi, orflet	face	Bengal, the "Black"	darkened
bitko, heap, mound	finger	Country)	
bitka, an outlying	ili-fusi,	(Skr. val, bend, stoop)	fole
piece of cultivated	fallow	"van, to wish)	fum
land	land	hear, test (= β aga-)	faka-za, testify

77. The affricate pf, derived from pa, is unknown to modern Zulu although quite a common sound in Bantu dialects. The interchange between p & f where pa is expected suggests that Zulu has lost this affricate within a comparatively recent period. Reanalysed it may become mp, mf initially or pretonic, & mba, mv medially or post-tonic.

In Santali, u-consonantal may be substituted for bi-labial β , thus:

Sant. isank' (= *nichak'), shrimp, prawn; Zulu in-fansi, shrimp;
 " uzi, a stranger, another of a different family; Zulu u-fo, a strange fellow, u-fo-bazi, a stranger from outside;
 " ucast, to press upon; Zulu foca, press, squeeze;
 " up', to pour out, tip out; " fumha, pour out, throw out water;
 " caswak', to spill, pour; " cepus, to pour;
 " hawh, flank (Idh. *ghex-); " in-hwapa, pit or flank of animal;
 " nthalak', hatlak', arapit (Idh. *ghex-1-lak; Basq. galts-arbe, arm-pit); Zulu ili-hwapa, arm-pit, Guto is-hafi;
 " ironi, to sprinkle (Idh. *uers; Skr. vrisa); Zulu fo-fana.

78. Transposition takes place when η occurs before r, l in Basque, as shown in euri, rain, euli, a fly, for η eri, η eli; so in Santali before liquids this η -consonantal either disappeared or else transferred itself to the vowel-position after the liquid; e.g.

rehet', root (Basq. erro), from Idib. 'nerd-;
lahur, to cut deeply, lak', to cut, pare, lakre, leopard; from
Idib. 'uelq, to tear; Zulu alomu, to tear, ili-alosi, leopard,
O.Zulu 'uluzhi; cf. hluzula, to tear, Basq. urratu(-uer a).

In these examples the labial character of voiced w or η is clear,
W when it
& has to be carefully distinguished from ~~gutturals~~ η , i, γ before η ,
:vocalised form of the voiced fricative ~~which~~ which
if combined with liquids produce the same interchange, viz.,
Santali η , l = Zulu al initial for ul. Examples of the latter class
are numerous but their history belongs to that of ~~the~~ ^{the} gutturals.
As instances only a few here need be given to show the difference.

Idib. 'gre-gre-gre, to rattle: Sent. rekrech'; Zulu wanhleza, rattle;
also, wanhleza, kegeza: Basque khurrinka, a rattling.
" *krop-, krop-, blood: Sent. rok', to gore, roket', blood;
Zulu ili-alule, gore, clot of blood; hlwula, to pay a fine
for shedding human blood; O.Z. ulawu-;
" *Kroh-, the god of the chase: Sent. Rohgo rufi, the Santals' god
of the chase; Zulu alungo, to exercise or train a dog for
the chase by developing its hunting faculties.

79. When strengthened by the nasal, η in Santali passes into m,
& is then difficult to distinguish from the combination η w which
has also become m. Where this w or η , however, is a devocalised
guttural such as q or γ , the change must have originally been to η ,
the labio-velar nasal, & not to m by which it is now generally
represented. Sometimes this m is dropped when final; e.g. η am, η o,
to get; sometimes when intervocalic, e.g. bhumi', bau η , earth, the
vowel being nasalised as compensation for its loss. It appears
for β or η in thutba, thutwa, thutma, thick: habka, hamba, dubka,
dubka, to frighten; bhus, mba, rat; tar-bhuj, tar-muj, melon; & as
m β in a stronger form in bankao, bambkao, to flare up; bomal, bomhal,
a clue, a part of stolen property; khablao, khamblao, to grab, clutch;
sum, sumbh, a mine (Zulu tape); kabhand, kamhand, the wooden frame
of a weaver's loom.

80. Without the nasal, γ or β is apt to be used irregularly because
of its weak & unstable character; hence such bi-forms as badai, adai,
to be proud; bambar, ambar, to pick up; bambaro, ambaro, the hibiscus
plant. But b seems to be epentactic in hamut, hambut, lie down;
hamal, hambal, heavy; komro, kombro, steal (Basq. ebatsi; Zulu eba= η yeba).

81.

Before $\underset{\wedge}{i}$, Santali m becomes n (for ny), as in zen , to go, from $\text{Yemi} (= \text{Idb. } \text{g}_{\text{m}}-i)$: Basq. $joan$, for Yomi : Zulu $hambha$: ^{Sant.} $ganso$, to honour (Idb. $\text{q}_{\text{em}}-$, $\text{q}_{\text{emi}}-$). Final m appears as h in Basque; hence Sant. $hadan$, man, Basq. $gizon$; $n\dot{u}tan$, name, Basq. $izen$.

Original m intervocalic is found in Santali $dabao$, to press down, keep under, $dama$, esteem, $dhamas$, influence, impression, forcefulness. The root is Idb. ghem , to press, the initial velar being dentalised in Santali owing to the following dental sonant. In Zulu $kama$, Herero, Kongo $kama$, Swahili $kamua$, to squeeze, press, there is no sign of dentalisation; hence the proto-Zulu type was qama , to press, squeeze, milk. (For Idb. $\beta_{\text{h}}, \gamma_{\text{h}} = \text{Zulu } sh$, see §. 48).

82.

Basque ma = Zulu pa .

Basque.	Zulu.	Basque.	Zulu.
$b\dot{a}ho$, unless	$funa$	$buztarri, uztarri$, a yoke	$fesne, tie$,
bai , yes	$fana, agree$	($Shr. vaant$, to tie)	$turn, twist$
$barrastu (= bagri)$, to reveal	$fakaza$,	$beltz$, black	$fi-pe$, fingo
$bethi$, always	$futi$ testify	$babazoo$, a quack,	$fefe-za$,
$babotu$, swell	$fumfuta$	charlatan	to lisp
$bel-de$, similar	$fana, be like$	$burno$, an oath	$funga$, swear
		$bortz$, five	$plamu$

85. The voiced fricative $\underset{\wedge}{v}$ is readily attached to any consonant, the combination resulting, as has been previously shown, in their labialisation; but $\underset{\wedge}{v}$ maintains its weak character under all conditions so that where labialisation is complete, the change is always to explosives like p, b , or ph, f, v in the case of Zulu but never fricative w or $\underset{\wedge}{u}$. Nevertheless, in some instances it might be reasonable to suppose that the change of $\underset{\wedge}{v}$ to b is really that of $\underset{\wedge}{v}$ to bilabial β . But of this little can be said, for so far as the modern speech is concerned, there is no doubt of this b as an ^{both} explosive, while the total absence of literary records, [^] Zulu & Santali, leaves the question open whether this b arose out of an older β .

By labialisation with $\underset{\wedge}{v}$ double forms may be produced; e.g.

Sant. $dhammanao$, $bhambhamao$, to buzz; Basq. $buzekatu$; Zulu $buzo$; $barea$, bar, 2, $dobor$, double, $dyo-kul$, both parties, - probably from an Idb. type dyog , dyog-g , although the form $barea$ is typically Indo-Chinese. Cognate to these are Basque bi , 2, $berr$, 3, in $berr-gei$, 40; Zulu $bili$, 2.
 " $bnoe$, $bhoyon$, fear; from which comes the secondary meaning of 'cholera'; the Idb. root is dyei- , dyeiz , to fear, hate, whence the Santal words $dus-su$, belittle, blame, $dusi$, a bullock with a white spot on its forehead (Zulu $isi-bazi$, blotch, blemish) $dus-tame$, hatred, $dus-man$, enemy (Basq. $etsi$, for zetsi). Also related are Basq. $bil-dur$, afraid (dyog-dur or dyog-dur); Santali $duru-kie$, frightened, timid; Zulu $zonda$, hate (= O.Z. notas , $zonda$); Herero $tonda$, to hate, from thonda , not thonda or zonda .

IDB. S = Sant. S ; Basq. ta ; Zulu da (then ds, then d, z).

Santali.	Zulu.	Santali.	Zulu.
sawasin, elder sister (Idb. *sawes-)	u-dede	dahi, se, edge, side	di
soro, old, ancient	dzi-o,	sen, sech', to	da (infinitive)
ni-see, breath	dede-za,	si-i', be exhausted	di-na, dimw
satahet', "	ndondo	soala, long, tall	de
gas-gas, very many	tandu,	soro, tear, split	dwi, tear, vend
	abundance	soja, straight	dwi, be straight
sasu, breathe heavily	dodoma	seher, swirl & dart, swirl, whizz,	whizz
		snear, etc.	whizz

85. By rhotacism Santali intervocalic ^s becomes r: or L, but this interchange is of a sporadic nature. Compare : tree.
- Sant. jar, resin (=Idb. *gesu); Basq. izai' ~~jar~~ (= *ietsei), pine-
 " hore, tortoise (Idb. *ghas); Zulu ula-fudu, Chama kaulu;
 " deroja, huge; Zulu u-sadonwe, a huge thing; Kongo
 Nzadi, a great river, the Congo; cow;
 " asrat, old & large; Zulu -alu-kazi, old woman, bullock or
 " asen to sit tailorwise; Zulu ukw-ala, sit tailorwise; Basq. elzin, spray
 " aola, yesterday (Idb. *ghies); Basq. atzo (= *gatzo); Zulu solo.

In the last equation, Santali aola is an onomatopoeic locative in -a, the same being represented in Basque & Zulu by -o.

The Zulu l we may regard as derived from an earlier ^{d or z,} dz, the interchange between d, z, l in Bantu speech being normal.

Compare also Sant. lesser, sharpen, Zulu lola (O.Z. *lodza);

& aaul, to domesticate; Zulu aluse, herd cattle, watch over, um-alusi, a herd-boy, shepherd.

86. Instead of the affricate ^{ts or tz,} Basque may prefer st, st by transposing its component parts; thus are obtained these equations:

Sant. barel, cold (Idb. *basel),	Basq. otz, ozt, for *botz; Zulu pola, to be cold (O.Z. *podza);
" bere, white, clean, Basq. burino, Zulu niopo (O.Z. *yilo-pe);	
" uli, saliva	" istu, istu : Atapapo, white thing
" maiju, woman	" e-maste ; Zulu um-FAzi
" kholeo, to spend	" gaster, expense ;
" milan, join	" ustertu, Zulu welo;
" lesser, sharpen, whet,	" extertu (*lets-), " lola;
" keero, itch	" mastari, itch, scab ;
" harek, all	" gusti,
	e or i,

87. Before ^{ts or t,} the sibilant in Santali may undergo a slight change either to ch or j, when the Zulu sound is stable.

Sant. jija, dung; Zulu dede; Sant. chuchu-much', sandfly; Zulu dudusi, sandy soil;	
" juju, male organs; Zulu dode; Sant. jomu, male,	" dume;
" jhambri, fish-trap,	" doba, to fish;
" jmur, thicket; Zulu dola, scrub; Sant. a-ch', self; we, same;	
se-see, the same, like (Ainu se-koro), ap-re, I myself, for *ip-se; Zulu o-dwa, o-dwa, self, ng-edwa, I myself.	

88. In Basque may be found ch, s, for ts or th; compare :
 Basq. ashek, side (Sant. san); sakno, a wound (Sant. jakham); sal, to sell (Sant. salis, arbitrate); ori-ene, this same; sartu, enter (Sant. soire); sako, impetuous, violent (Sant. saluch', in disorder); sarati, noise (Sant. saroca', cry, make a noise); soltas, alder-tree

(Sent. sel, a gregarious forest tree, a teak); sandis, such, such an one, from *sam-, tsam- (Sent. saman, alike, such, same); sari, praise, reward (Sent. sari, a form of address, saraso, to praise); class-sari, eulogy, lit. "word-praise"; sarri, soon, -an adverbial detive from *san-ri (Sent. san-ak', at once; san'ok, opportunity); saku, setse, dirty, ugly (Sent. sakhi, dirty); sebetu, to subdue (Sent. jabin, jabun, jabri, overcome, overpower); sasi, servant (Sent. sasa, serve, worship, render homage); *sens(ohs.), day, as in Marte-sens, "day of Mars", Tuesday (Sent. sin', day); sudu, interest, usury (Sent. sudi, sod, sud, usury, profit, soda, to liquidate a debt, sadgal, money-lender); szero (= *tsa-tsaro), dew, Sent. si-sir, dew, from the root in siro, soro, sire, to flow; Zulu solo, dew.

89. Besque th(fz, ts or s) = Zulu da(ds, d or s).

Besque.	Zulu.	Besque.	Zulu.
sarri, soon	de, de, always	aizta, sister	dede
sudur, sur, nose	deva, shout	saxu, dirty	dungs, malice turbid
stai, enemy	souda, hate	salo, violent	duda, inflame
gatata, perceive	nyeza, conscious	sari, praise	dulala, address
atzo, yesterday	zolo	au-se, ori-che, same	e-dwo, self
szero, dew	zolo	zingira, pool	dangu
sikini, dung	doko	sudu, profit	suzs, gain, get
ots, otz, ext, cold	pole, be cold	zizpura, a tear	lila, weep
utsai, sand	dudusi	izen, to be	i-le (Perf. tense)
chamr, ear, old	dula, antiquity	sahax, edge, side	ndi (= *dhi-)
chista, whistle	ndwi (= *dhwil)	sakho, wound	ndomve, to rumour

90. Certain pronominal forms in -a- may here be noted although their discussion belongs to Comparative Grammar.

81-3,
IDB. *SA, ^{AI-3,} _{AI} as: a pronominal particle employed as a suffix of masculine nouns; e.g. Sent. bok-as, to enter, muddle

insertions, etc., whence bok-as, a wizard; a-an', self.

*dhu, dm, zu > zih e, self,

Zulu ^{AI} _{AI} which by Ulaut is modified to -zi through an

intermediate ^{AI} _{AI} -zü. Cf. kots, clean up, glean, isi-koto-zi, gleaner (with detive koto-se, to glean); ili-dalanya-zi, a devil-may-care fellow; bada, flounder about, isi-bada-zi, a clumsy, thickset person (with detive bada-as, to stagger, waddle); u-si-bani, Mr So-and-so (Bani, somebody); kulu, great, um-au-bukwana, grandchild.

IDB. *SIA, ^{AI} _{AI} she; af. bok-zi, witon; i-an', she, herself.

Zulu *dhu-^{AI} _{AI} = zazi: qiki, move slightly (as the breasts), ili-qiki-ze, a girl between 16 & 25; isi-fango-ze, an immoral girl; lece, swing, dangle, um-lece-ze, a pendulous breast; um-vo, last-born child (male), -ave-se (female); isi-lahi-kazano, "a little one", young lady; u-sa-kwabo, "she of them" (or their aunt), a concubine; ili-si-kazi, in-tai-kazi, female of animals.

~~An archaic pronominal case seems to survive in the compound u-zi-as, his, her, their father, but u-zi-as-bulu, his, her, their grand-father points to an older form like 'dama'. The copulative pronominal particle appears in the word in-dod-ia-ze, a man indeed, from in-doda, man. But this is traceable to IDB. *e-i-s & not ^{AI} _{AI} as the other word, it can be not a true pronominal, it can only be a noun. Cf. *dama, he, this, with another pronominal *dama. The latter~~

91. IDB. Z = Sant. S (for Z; also j or nil); Basq. d, z (for dz or da); Zulu t, s (for ts, th).

Santali.	Zulu.	Santali.	Zulu.
sar, level, smooth	ts	sara, funeral-pyre	tums, grave
uset', to burn	ota	sulak', tatching-needle	tulo
saba, claw, talon	tupa	sumba, a mine	tapo
sok', thrust, sew	tunga	ssaj-la, 3rd of family	thathu, three
gadeso (gheuz-), choose	meta	sik, a tree	ti
se(-ser), louse	twala	soka, witch-doctor	taka-ti (-toya)
sak, a system of borrowing	tenga, barter	Sin, Jehovah	(? Time)
newa, dew, reverence	toba, bow	led, lost', mud	lota, ashes
		ler, lears, semen	lota

91. Santali has lost the sounds z & zh (French j) which survive in various Kolarian dialects, as has been already shown, while in the Tibeto-Burman & Indo-Chinese families of speech they are still common. Their existence in Bantu, partly also in Basque suggests their original use in Santali & all Kolarian dialects. For want of them, this language employs s or j, sometimes cerebral ⁴⁷ d, or else the sound is vocalised & lost. In modern Tibetan the French j is written as 's, where Santali has only s; e.g. Tib. sin, tree, wood, Sant. sin, tree, (HO sing), as in tale dare, tale sin, the palmyra palmtree. This is related to Hurku tsing, tsing, Limbu shing, Lushai thing, tree. Similarly, Tibetan dag, day, Sant. sin, day, the IDB. consonant being undoubtedly a voiced sibilant z or zh.

92. The loss of z leads to a frequent interchange between s & d; soro, dara, slightly; seren, deren, horn; daili, sili, careless; dnergü, sargu, big; darsar, dhardar, the slope of a hill; darum, serum, shaggy, hairy. Complete vocalisation is frequent; e.g.

Sant. buyut', to tarob, Zulu futa: dhūa, smoke, for dhūza, Zulu in-tuta, smoke, isi-tuta, ancestral spirit, a god, isi-tunzi, shade or spirit. The latter word is not with in the compound dhua-kos, a steamer, lit. "smoke-boat", the root koz, boat, canoe, becoming yato in Bantu. The root is unknown to Zulu but there can be no doubt that the Bantu dental is traceable to an IDB. voiced consonant Z, which Santali now represents by S. The absence of dh in Basque leads to the interchange between d & z (for dz), or fricative l in lieu of either. We may, accordingly, equate Santali kos, Bantu yato with Basque ala (Guipuzcoan), a small boat larger than a canoe; whence alaz egin, to stay at sea; so-zabal (-alo-), a boat without a deck; alero, a boatman. The O-Basque type should then be *hadza, -whence *haza & then hala, ala. (There is another word for a larger type of boat, viz., gabarri, Zulu um-kūmbhi, the IDB. root being also found in Tibeto-Burman; e.g. Limbu kombe, boat; but whether such inland races borrowed names for junks, coracles, & "lug-outs" from the maritime Indo-Bantu races of China & Indo-China is an unsolved question. As the Aimu word for boat is chip (IDB. *ghebh-), the borrowing seems scarce likely to have been on the Indo-Bantu side.)

- RS. Sant. merhat', iron; Basq. burdin, burni; Zulu nyēla, iron cross;
 " oharat, a mane: " caurdak, zerdak, zurdak; ~~zurdak~~
 " arwa, pretence, excuse: Basq. erru(=ersu), error,
 errebelatu, wader;
 " tiraol, to wipe: Zulu sula:Basq. chaustu.
- RZH " ardao, to obtain a good harvest; hence, to gain, acquire;
 arjon, crops, agricultural produce(Idb. *argh-);
 Basq. arrontatu, to earn(O.E. *arzo-, *argio-);
 Zulu ulw-Indhla(O.Z. *inxla, irala), the time when the
 new seedlings become ripe for the harvest.
- ZHR " Sant. sir, nerve, vein (Idb. *ghy-, nerve, gut, sinew);
 Basq. sare, rare, cord, string; Zulu in-tloli(O.Z. *siall)
 hair or hairs from the tail of an ox; sinew, gristle,
 cartilage.
 " sira, edge, corner; Zulu isin-tloli, edge or margin of
 the rugles in a sleeping-mat.
 " sorad, punish (Idb. *ghredh, *zhredh, to wound); Basq.
 sarratu; Zulu alosa(O.Z. *siloti), to wound.
 " sorr, to move rapidly(Idb. *ghredh, *zhredh, to upset);
 Basq. ~~sorrek~~ cherrent, quick; Zulu hlantlula, to skim
 along(O.Z. *sjar-sjar);
 " SOREN, one of the twelve cents of the Santals, named
 after the Pleiades, Soron-ko, the 7 stars in Taurus.
 (The Indonesian affinities of the latter word may be
 gathered from these names for the Pleiades:-
 Maori, Hata, Mangareva Tari-ki; Tonga Tali-ki; Samoan
 Tali-ki; Marquesas Tai-ki; Tahitian Tari-i). The IDB.
 type from which Santali comes is *ghrein-ko, *zhrein-ko,
 Pleiades, which readily equates with the root in Basque
 garalla, pebbles, gravel; & Zulu ulu-hlalu, beads(O.Z.
 sialu; cf. Kaguru u-salu), the collective noun being ulu-
 ulu-hlalu, small stones or pebbles. Thus, it is certain
 that the Pleiades were originally called the little
 "beads", while beads as ornaments were small glittering
 stones or pebbles; but there is some doubt about the
 history of final ko in Sorenko, as it may be a false or
 genuine plural. Zulu hlalu points to an Idb. type
 *ghreizgo-, pebble, bead, & not *ghreinko, while the Indo-
 nesian cognates also indicate that the plural-form
 Sorenko is an instance of false etymology, as the older
 type seems to have been *zhrezgo, then *Sore'ko.
 Some ancient Basque plural-form *Grigl-ek, Pleiades, the
 "pebbles" or "beads" (whence modern garalla, gravel), seems
 to have been borrowed by the Celts of Spain, for it exists
 as an isolated root in Irish & Gaelic(cf. Gaelic
 Griglachan, Pleiades, a collective noun derived from
 the same root as grig-ag, a little pebble; *grizgo-).
- SR, SL " rara, to loosen(-Skr. srata, slath); Basq. zilhetze
 (for zletz).
- SH. " setrel, swimmer, from the root *snat, to swim(cf. Skr.
 snati, bathe, float); Basq. negu, winter, the "moist" or
 "wet" season, from *negu, Idb. *sneigh-, to be wet;
 (allied to Skr. snih, snehati, to be humid).
 " nari, to wind thread; nar, umbilical cord; natwa, the
 winder of a spindle; from Idb. *ana-, snat-, to wind, spin;
 Basq. *nara, net(obs.), as in abicho-nara, a net for
 catching small fish; allied to Skr. snayu, sinew.
 Exceptions to the general phonetic laws of Indo-Santa
 languages directly result from combinations of this kind;
 & among these we record Zulu sota, to twist, Herero
 sotorora, from Idb. *snat-, twist, weave; & abu-sika, winter,
 Idb. *sneigho-not the "cutting" period but the "wet"
 season (Suan., Yao na-sika).

103.

- ST. Sant. for, a sting (Idb. *steg-; a sting, from *stegi-, to prick);
 Basq. tileta, a little point, a dot; Zulu doli, sting;
 " thari, a brass plate; Zulu in-dondo, a brass ornament;
 " cherachere, hard, stiff; Basq. zurrun;
 " pachil, the back (= *paci-; Skr. prishtha); Basq. oste, the
 back, ertan-gore, on the back; Zulu umu-va, the back;
 in-vandasi, the quills on the back of the porcupine;
- SD, ZD " chur, chad, to permit, chupi, permission (Idb. *qesd-);
 Basq. auzu-tu, to allow, permit; Zulu um-zuzu, long leave
 or stay among friends, zize, to linger (fr. *yⁱuz);
 " aten, to hear (Idb. *ausd-); Basq. entan, hear, listen;
 Zulu ezwa, to perceive, feel, hear
- ZDH " siur, to whistle, murli, a whistle (Idb. *siuzidi);
 Basq. chistu, istu, whistle, huchtu egin, to whistle;
 Zulu um-lozi, a whistling, Swah. mw-unzi (O.Z. *dzosti).

104.

- SK. " puchhe, to ask (Idb. *prsk-; Skr. prachh); Basq. eskatu,
 from O.Z. *f^raska-; Zulu buza, ask, Herero pura (= *β^rgza).
- SKH " tons, to cut; whence thuni, little, themko, short (from
 Idb. *akhōna, to out, shorten); Basq. chestu, for *chenatu,
 to break small, chiki, chini, small; -ska, a diminutive
 suffix, as in mendi-zka, a little hill;
 Zulu hina, cut short, huna, cut too short, u-ngini, one
 with limbs truncated or cut off; isi-xive, isi-xive, a
 pygmy, Bushman; ubu-cubu, a chick, small fry; cupa, to
 do anything very slightly; isi-cu-cu, tiny particles, shreds;
 cupi, Hlonipa cupi, short. The same root probably appears
 in umu-kwa, a native knife, & um-kento, assegai; isi-qinti,
 a shortish person.
- SG, ZG " pilchu, small (Idb. *uezgu); Basq. pichka, pichka, little;
 Zulu vi-ti, to fall or pull to bits; also probably
 in-vili, small particles, see specks or atoms.
- " maskuto, soft, Basq. malxu, malau;
 Sorenko, Pleiades (= *zhrezgo); Basq. garaila, gravel; Zulu hlalu, beads (S. 102).
- ZOH, ZGH " mora, growing shoots of grass, moho, to bud (Idb. *mozga-
 to bud, sprout); Zulu mila, to germinate, sprout (Idb.
 *mezga-); Basq. oaitu, to sprout, for *mozgi-. The Zulu
 verb *mitaka = mila points to an Idb. type with e or i.
- KSH, QSH " suluk, peace, del, a dead calm; Basq. chito, silence;
 Zulu xola, to be at peace, zola, to be calm (Idb. kshai);
 " akhrot, walnut, Skr. akshoda, Basq. eshariko;
 " (Skr. lukshi, valley, ravine); Zulu goxi, ravine, dell;
 " haler, destroy; Zulu xwala, to be corrupted, consumption;
 Basq. gel-beria, fever (Idb. *qsher, to destroy).

105.

- QSHH " Hicar, a master, owner, lord, plutocrat; hisiau, to rage;
 (related to Latin Caesar, from Etruscan Kaisar, Kēzar);
 Basq. guidaria, guidaria, a chief; Zulu in-Mosi, king,
 chief, the supreme ruler, ubu-kosi, majesty; O. Zulu Xi-, Ksi-
 as in Xalmo-xia, "lord of heaven". The Idb. root is *ghshei,
 to destroy (= Basq. zuzitu), -whence no doubt the first king,
 or shall we say the progenitor, of the Indo-Bantu race
 derived his title of Apollyon, the Destroyer.
- QHS, GHZ " hola, yesterday (Idb. *ghies or *gzhe-); Basq. atzo; Zulu
 igolo (Idb. *gzhe-), Swahili ja-na (Idb. *ghie-);
 " hajar, 1000, Mandari hazar, Skr. sa-haura (Idb. *ghsi-);
 Zulu kulungwane, 1000, Duala kuli, Taka niuru, Lolo, Ngala,
 Bengi nkoto; Basq. izor, big, large, perhaps for *gzor. (The
 z is sonant but the guttural lost; & the idea seems to be
 a huge number or quantity). Cf. Zulu suffix -kazi, huge, large,
 beside the verb kuvula, to make huge or large (O.Z. *k^z L-a, with
 sonants z & L).

106.

GHZ: Sant. a, s (O.Sant. ha, gis); Basq. g, z (for ex); Zulu s, ts (ts).

- " haa, haa, cartea (Idb. *ghazam). Aini shin, shir, cartea;
 Zulu umu-zi, kusal, village, tribe, nation (O.S. *kwin);
 " haasen, pain, hāsi, to meet with loss, hāso, anxiety;
 Basq. gāze, enaze, anxiety; Kuza, to express pain,
 grief, anxiety, disapproval, etc. (Ainu saik, sorrow); *kuLulu*,
 " hārek, sarek, all; Basq. gurti, gurti, *to be sad; ulu-Sizi, pain, sorrow*,
 hore, sorok, road; Basq. endre-zera; Zulu um-zile;

- " sut', to dress the hair, (Ainu shiocho, to trim the hair
 after the Ainu fashion); Zulu zonyu, dress the hair;
 ulu-sintsi, hair of a man when descending far into the
 middle of the forehead;

- " dak', water (Idb. *ghazhaq-); Zulu umu-zi, water;
 (Cf. Ggi, ghi, water, in MOSO (Indo-Chinese) from the type *GH=M'in).

GHZ, GHZ "

haku, a fish; Basq. aze, Spanish newi (-*Ainu). Zulu
 in-tlanzi, fish, Munga hlamphi, are undoubtedly related
 to the verb hlamba, to swim, wash the hands, & is espe-
 cially associated with burials & the "washing" of the
 dead (Cf. hlambo), the customs of the Zulus dating
 back to Indonesian times. The root in the sense of
 "to wash" is sobot', in Santali & gabito in Basque.
 Hence the initial sound combines gh with the correspond-
 ing sibilant z. The b is not primitive as it arises
 out of m, which is retained in the archaic verb Un,
 for *ghum, *suum, to immerse, um anin, ceremonial washing
 or purification. It will be noted, therefore, that the
 word haku, fish, is radically connected with this
 root *ghzlem or *ghziyem, to swim, wash, but has a
 special suffix which has an emphatic form in the Koro
 dialect, viz., hakuu.

The Santal type *sum, *som is obsolete except in the
 single expression Somae schin, the sands of Somae
 whither the souls of ancestors go after death. They
 have first to be washed & their bodies flung into the
 sacred rivers before they can reach the homes of their
 celestial desires. To say, accordingly that the Ganges
 or Damuda has carried someone's dust to the Bay of Bengal is
 to mean that he has "gone home". Cf. the phrase:
 Lemai gital, Somae schateye chaloema. "He has gone
 to the fine sand & the SOMAE valley"; or, he is dead.
 Somae is the Old Santal name for the Indian Ocean, &
 means the "son of the dead" which is said to be in the
 south, & the Ganges, or nowadays the Damuda, is the
 "River of the Dead" (Mora Nai) which flows into the
 "South Sea" (Mora muhar, "towards the dead"). It is
 passing strange that almost all the Aryan languages
 name the sea (Latin mare, etc.) after the Indo-Bantu style,
 although they never buried the dead at sea, as is still
 done in Indonesia; while so far as the Santals are con-
 cerned, their burial-customs are of undoubted Indonesian
 origin. The name Somae, sea, is related to Aini shum,
 south; hence it must be the Idb. word for the "South
 Sea", & not originally the Bay of Bengal which the
 Ainus never saw. The root-meaning is seen in Aini
 shum, sum, to be drowned. The latter idea
 has been traced in Zulu tlanzi, fish, & hlambo, to swim
 wash, immerse; the former possibly occurs in ili-zantai,
 the country down south or along the coast; um-zintsi,
 the south-east wind (orig. the wind which blew from
 over the sea of the dead); also the "lower part" of
 the body from the hips downwards. From the history
 of these cognate words in Santali, Basque, Aini, & Zulu
 we infer that the Indo-Bantu race lived on the north
 or upper coasts of this "South" Sea because everywhere
 it is regarded as "below" or to the south of its home.

From the foregoing examples of exceptions to the general
 laws of Indo-Bantu speech, an attempt has been made to
 prove the existence of primitive compound sounds which
 are responsible for phonetic vagaries arising from
 different combinations with s and z.

G.

iv.
PALATAL GUTTURALS

IDB. K : Sant. k, (ch); Basq. h, (ch); Zulu y, (j, tsh).

Santali.	Zulu.	Santali.	Zulu.
ok', smoke, vapour	un-oye, spirit	kombro, steal	cha(=*ieba)
keboj(Ainu kopsk), scold, blame	yova	kadhao, blame, reproach	in-ja
kuwau, to lose	yfbaza, corner	(Skr. gvan, dog)	tshifo, tower
ich', dress, dress	isi-je	kila, fort	tshede
choaga, reed, pipe	tshingo	kuya, soot	tshede, beard
chelket', smooth	tshela	kewu, chin	tshala
		kuswa, to plant, cultivate	abu-tshwala
		khel-od, a feast	

108.

For loss of K in Santali before t, compare hit, wall, Skr. bhitti. By devocalisation, k may be reduced to h, while spirant y in Zulu is labialised to w, under the influence of u.

Sant. lahas, body; Basq. -lotz, as in il-lotz, a dead body :

" hal, chal, state, condition, hal-o, thus; Basq. hale-halo, ala-ala, thus, so-so; Zulu jal-o, thus (an old locative);

" parhao, to read (=idb. *prek-); Basq. irakurri, to read ;

With spirant χ in Zulu.

Sant. caok', to kiss; Zulu uk-wanga; Ganda nyegere :

" kachokur, a snake's slough; Zulu ul-wabuzo, a slough, obuzo, to cast off the slough;

" kutru, puppy; " uk-wundulu :

" kon, canoe, boat ; (Basq. ala, for *hala, *haze; (Bantu wato) :

" khari, fall, gur, fall, die (O.Sant. *kwer); Basq. hiru, to die, hil, il, dead; Zulu ju, to fall, die; wa, to fall, die; yela, wela, fall, stumble. Cf. also Yao wa, die, fall dead ;

Ganda, Kyanga, Bendei gwa; Kongo hwa .
(Sansk. kham, roof of the mouth, palate; Basq. aho-ganga, 'mouth-roof', palate); Zulu ul-wanga, palate .

(Ainu kumi, mildew; Zulu isi-wumba, mildew, rust on corn .

109. In Basque the h-sound is used arbitrarily & very often lost.

Sant. haka, heart (B. biotz, bihota); Khui, a wall (B. houn) ; *taya;

" dakao, call, invoke (B. deitu, call, for *dehi-); Zulu to, for

" kandum, a pad or head-rest; Basq. belarr-uzuko, a pillow, for belarr-i-mondoko, "ear-pad"; Sanscrit kandu-ka, pillow.

" chilene, flax: Basq. churroin, a bunch of flax (= *churroin); Zulu in-tsangu, wild hemp.

" sukri, a pig ; Basq. charri (= *chakri).

110. For the soft palatal fricative ζ (which is not to be confused with velar γ), Zulu sometimes employs a circumstance which would lead one to infer that in Old Zulu ζ was slightly more guttural than γ -spirant, both of these being very weak consonants & easily interchanged.

Santali.	Zulu.	Santali.	Zulu.
chinta, thought, idea, reflection	qonda, reflect, understand	Korwak', staring at	qalaza, stare
kam, to do	qa, qe-do	ketar, gnash the teeth	qa-qazela
cha, not	qa	kular, chach, smear	hva(=quqa)
kep, foam, froth	gqumbu	khof, to seek	qala
kameo, a pleat or frill	qina, to plait the hair	kere, to begin	qala
kere, hard	aqala	khar, a flock, herd	qule
kochor, to mop about	xaka, qiqina, eodoma	kehe, vulture	nye(Xosa qe)
		kikir, kingfisher	isi-xida,
			u-nongo-zolo

11. - The word khir is of Sanskrit origin & the guttural is

The word *kikir* is of onomatopoeitic origin derived from the root **kir*, as in *kikir*, to call out loudly, *kikir*, the call of the partridge, *kikirau*, to trumpet like an elephant, *kirot'*, *korot'*, to cackle like hens; also *kakarat'*, *kakrat'*, to cackle. Basque are cognates *koroka*, *koloka*, *kakaraz*, *kokoroz*, *kukudatz*, the cackling of hens: & these appear in Zulu as *kekela*, to cackle, *kikiliza*, to crow. (*Kuku*, a fowl, is not related to any of the foregoing, as its verb-root is Idh. **kuu*, to call). In the case of onomatopoeitic words, phonetic irregularities are always certain to occur, & these examples are no exception to the rule; but Zulu seems to have early lost sight of the connection of the name of the kingfisher with its peculiar call, as the word *kila* has been subjected to the ordinary rules of phonetic change.

III. Nasalisation in Zulu.

According to the Law of the Nasal, the voiced fricative palatal *y* should pass into *ng* initial (pretonic) or *nkh* post-tonic. As neither sound now exists in Zulu, substitutes are used, *ng* initial becoming *ng* but more often *ny*, & *nkh* medial appearing as *nh* softened to *ng*, *ny*. Thus, Santali *ke*, by, Basq. *ka* (Idh. **qe*) is *ng* in Zulu instead of *ya* or **nghs*; Sant. *ke*, a particle which is the sign of the Conditional mood, but of the Optative in Basque, is in Zulu *nga*, a particle which is used in conjunction with the Optative mood to express a wish or desire, or by itself can express the Optative (e. g. *ngi-nga-hamba*, I may or can go). Both as a case-suffix or preposition & auxiliary verb the particle *ke* in Santali is derived from the root of *ka-na*, to be; but this does not exist in Zulu unless we suppose that *ng*-*na*, to enter, "to be in", is the same old root with a secondary meaning.

Sant. *kulai*, hare ("the burrowing thing"); Zulu *ngula-be*, pig : Bongo

" *phāk*, space, distance, interval; " *ili-bange* : *gala*, to root up ;
 " *huka*, to snort like a bull; " *houya*, to bellow ;
chamre, *chère*, a bird (Idh. **gen*, to sing), Lopeha dialect *nyōt*,
 a bird (centroccoccyz bengalensis): Zulu *i-nyoni* (C.Z. **yon-ri*, **yōri*):
Yao li-juni, Harango *shiri*. In this word the final vowel is all
 that remains of the noun-suffix *-ri* which in most Bantu dialects
~~has been generally adopted as the classifier li-, ri-(Class 5).~~ has lost the *r* through its
 eclipse by the nasal. The suffix is, moreover, redundant as it
 has been generally adopted as the classifier *li-*, *ri-* (Class 5).
 In Basque *cho-ri*, bird, the loss of the nasal in the root accounts
 for the preservation of intervocalic *r*, while the suffix *-ri* is
 of the same origin as the prefix in *ili-nyoni*, *li-juni* in Bantu.

112. Basque H, (CH; ʒ); Zulu y, (NY, J or TSH, NG).

Basque.	Zulu.	Basque.	Zulu.
hume, child	nyamu, infant	chori, bird	nyoni
anla, tauts	njalo	chafle, ointment	jova, vaccinate
ax, hats, breath	um-ova, soul	chorro, tube, pipe	tshingo
ebatsi, steal	tba	chimeldu, wither	ona (= *jona)
idi, buffalo	nyatsi	changu, chaisku,	xuga, walk lame
(Sant. kade)		(Sant. khafij), lame	nyonga, cripple
idiki, to open	nyandu	chulo, hole	ngulu-be, pig
inguru, circles	yingelezi	chin-chosta	qina, to plait
hamar, 10	shumi (= *zhumi)	a pleat, frill	hair

113. When palatalized by i, the spirants h & y should become sh & zh, but as Basque has no sh & Zulu no zh, other substitutes are employed. When assimilation is incomplete, we may find s in Basque & z in Zulu. Compare the following equations :-

Sant. kapi, axe ; Zulu zembe; Sant. kask, greedy; Zulu -zizi ;
 " katali, word, " zwi (Basq. hitz);
 " ko, they, a-ko, they (emphatic); Basq. -k, ask, they; Zulu zi, isi;
 " -k', -sk', -ok', self; Zulu zi, self, selves ;
 " kufila, coal; Zulu zilo; Sant. kola, belly; Zulu zalo, womb;
 " kapchi, scissors; " isi-zenze; " khakra, whence; " in-zensane ;
 " koo, kho-kho, to hiss; Basq. suto, snake; Zulu i-nyoka ;
 " keke, vulture; " sai " ili-nge ;
 " khel-od, a bear-feast; " jeli (= *sheli), " tshwala;
 " chikana, a sign, mark; " khaku, mark, (Dantu zina, name)
 " khent-ok', a dwarf; " chith-al " isi-zenze
 (The Zulu prefix isi- here agrees with Santali only).
 (Ainu kam, flesh, meat); Basq. somarrak; Zulu nyama ;
 (" kamui, god, deity, spirit, devil, demon; also a title
 applied to anything great, important, fierce, large):
 Zulu um-ximu, a ghost, spirit, demon; zimu-la, to do
 largely, abundantly, awfully, vastly, etc., zimu-ka, to be
 or get large in body or bulk (but not bony or muscular);
 Basq. Zentoi, giant, probably for *aham-to-, if the word
 is a native term. Cf. Zulu ili-ximu, cannibal.

Exc. Zulu in-tsimango, monkey; Basq. chimu, chimiffo . Not of Polarian origin & apparently the name of an Indo-Chinese species of monkey, after which a part of the Malay Peninsula was called. Compare : syamang, baboon, in the dialect of the Semangs (Malay Peninsula); Sanscr. syama, black.

114. Occasionally Basque wavers between s & z, but in most cases, the influence of e or i is the cause of its softening; e.g.

osaba, uncle (Sant. kaka), ise-ba, aunt (Sant. kaki) ;
 es, not, without (Sant. ek, without; a negative particle);
 zotz, for *seitz, wood, heath (Sant. kat); and Santali
 eka, one, beside Basq. -ega (obs.), one, in ham-ega, ham-
 ham-eka, hama-ika, eleven, from hamar, 10, & -ega, one.

The unvoiced sibilant, however, remains constant before other sounds, guttural, dental & labial; thus :-

esakatu, to ask (Sant. puchhe, from Idib. *pyrk-);
 des-tatu, to look, behold (Sant. dorson; Idib. *drsh-, *drk);
 aama, feeling, emotion (Sant. aikau, feel), Zulu aama).

115. IDB. 3 =Sant. 3, (J); Basq. Y, (J); Zulu H, M.

Santali.	Zulu.	Santali.	Zulu.
gar-garo, rumble	holc-be	gãgã, rumble	nãns, rave
gudan, rumble	haza	gapur, gayur, poor	nche, namfu
gore, pannier	holo	jhal, entangle	hila, catch
golam, dark	alwa, be dark	goli, a loop	hibe (= *hil-β)
gonor, drag	hola	ganduk', slovenly	hugu, sloven
goetha, dung	huda	laga, a charm	lawu
jom, eat (IDB. *gembh)	nomfuzn	chigari, mock	cayisela
ger, to bite	hula, cut, reap	(Skr. raj, sun)	langa
gaya, a capon	hoye, goose	rae, counsel, order	laya, direct.
gol, to boast	holosa, speak	(IDB. *reg, rule)	order
	stentionally	gahir, deer	hoholo, deer call

116.

When palatalised by i, we should expect Santali ʒ, Basque sh, & Zulu sh: but each language follows rules of its own according to its range of articulation. Thus, for ʒ which Santali has now lost there may appear j, or else s, -as in goj, soch', to die, gani, sani, forgetful (=Basq. shantsi, forgotten; from shantsi); gator, sator, family (=Basq. uztarila, family; from *zhasar-la); in Basque the palatal spirant may be j, sometimes hardened to ch; or z for the lost zh through incomplete assimilation. It is dropped initially, as in shantsi, forgotten, uztarila, family, elhe, word, voice (Sant. gala, voice), ipui, story (Sant. gam; Zulu sumo, tale, story). In Zulu palatalisation before i or the dental vowels converts the fricative h into hl & s (sometimes ts; the Zulu change of s to ts, being similar to that of Basque s, ts, tz). Compare the following:

Sant. gagel, crowd; Basq. galde, galde, herd; chulo:
 " gawer, foolish; " zoro, zor, zor; Sant. garhe, hole; Basq. zulo,
 " gore, basket; " zare; Sant. gursilon, dirty; Basq. zirnil;
 " gorob, heavy; " -zerro (obs.), heavy, bad; as in lo-zerro,
 nightmare, lit. a heavy sleep.
 " go, woman, mother, gimi, wife, mistress; Basq. zauri, wife,
 woman; Suto mo-bali, wife, woman;
 " jamas, old age, jar-jaras, shrivelled; " zarzaro, old age.
 " sen, to go (IDB. *gmi); Basq. jin, come, joan, go; Zulu hambe;
 " jom, to eat (IDB. *gmbh, gembh, devour, bite); Basq. jan; Zulu
nomfu-za, to devour;
 " janam, to be born (IDB. *gen); Basq. jaye, fr. *janom, to be
 born: jayotse, birth (= *janos);
 " gola, master, lord, owner (prob. from *qon-la; cf. gom-he,
gom-ket, mistress of the house, wife; Mundari Gomko, lord,
 God; Kuruk Gomoi, God; also, the sun); Basq. jaun, master,
 from *jaum, *jom; jaube, jabe, master, from *jom-he; & prob-
 ably the dialect-form jaun-goi-ke, God, the "Lord on high".
 In Bantu this old root has usually the meaning of sun, e.g.
 Swah. jua; Herero e-juva, Ganda juva, which Meinhor traces to
 a Bantu type *yua, sun; & only that of "God" in rare cases;
 cf. Duala L-oba. This confusion of ideas can doubtless
 resulted from borrowing words or else is caused by different
 roots being now similar in outward form. Basque & Santali
 make the distinction clear but the apparent confusion in
Kuruk Gomoi, God, sun, almost suggests where Bantu first
 learned to identify the one with the other. Hence, this root
 *yua, sun, cannot be related to Basque jaun, & Santali Gom-he.

The nearest cognate to Basque *jaun*, master, would seem to be the Bantu type **χami*, king, chief, lord, master; whence Karagwe -*kama*, Konde -*wami*, Ganda *mwāmi*, Ngombe *kumu*, Kongo *mumu*, king, chief, lord. As the initial sound in Bantu *χ* ~~appears to be a breathless~~ palatal or labialised palatal *kf, f*, the Indo-Bantu consonant must have been voiced; and we regard the Zulu word *Qume-de*, (a title of honour used in addressing the Zulu king, which was adopted from the Swaba chief), as the proper cognate to Basque *jaun*, master, chief, the *g*-palatal being the corrupted form of **hum-*, **χum-*. In the sense of God as the Lord on high, or Lord of lords, a few dialects still seem to use this root in compounds; cf. Ki-Iolo Nza-Komba, God; Ronga Mbulu-Kumba, God.

117. When *z* is intervocalic, Santali may have *r* by rhotacism; as *tor*, a sting, from **togi*, **stogi* (Ido. **steg*); Zulu *desi* (-*dohi*). The modification of *h* in Zulu to *s* (sometimes *z*) under the influence of *i*-consonantal is common; thus are obtained:

Santali.	Zulu.	Santali.	Zulu.
<i>ghamao</i> , stir oneself	<i>sebenza</i> , to work	<i>gagaj</i> , need	<i>swezi</i>
<i>ghamote</i> , toil, work	<i>to work</i>	<i>ga-pe</i> , to-morrow	<i>so</i>
<i>gaje</i> , guju, numerous	<i>tsudu</i>	<i>gala</i> , voice	<i>swi</i> (= * <i>soi</i>)
<i>gagae</i> , many		<i>gama</i> , hole	<i>sole</i>
<i>ghavica</i> , to break wind	<i>susa</i>	<i>gamao</i> , remember	<i>kumbala</i> (= * <i>χum-</i>)
<i>galti</i> , <i>goti</i> , fault.	<i>sole</i> , complain	<i>go-b</i> , steal	<i>ili-sela</i> , thief
<i>ge-t'</i> , to cut	<i>si-ka</i>	<i>sithi</i> , a swelling of the groin	<i>sende</i> , swelling of the testicles
<i>gungut'</i> (<i>d=ge, gi</i>), shave the head	<i>singa</i> , shave the head	<i>ghorni</i> , whirlpool	<i>zulu</i>
		<i>chadlon</i> , <i>cholon</i> , tailum-sila (from * <i>gieg-i-on</i>)	

118. The emphatic particle *ge, gi*, in Santali ^(which) is very like the Greek *γε*, as in *δ-γε*, *is* cognate to Zulu *nje, nje-na*, so, thus, only, indeed, merely (expressing surprise), -an emphatic particle but used generally in a disparaging sense; cf. *nje-azele*, an important nobody, *un-je-nlevu*, an "old girl" or spinster of very uncertain age. Both in Santali & Basque it occurs as a suffix: Sant. *uni-ge*, even he; *noko-ge*, these indeed; *he-ge*, even so, certainly. Basq. *handi*, great, *handi-che*, too great.

Another Zulu word which may be added to the foregoing list of examples is *in-t-suno*, a folk-tale, story; whence *simu-za*, to tell the tale, relate ~~many~~ adventures; *sombulula*, to spin a yarn. It has been connected with Swahili *soma*, to read the Koran, & Shambala *tsoma*, to speak brokenly (as in a foreign tongue); & also with

soma,

Heffin, to attempt, try (as a foreign language). The word tsumo is a survival from remote times when the ancestors of the Zulus in Bengal & Indo-China amused themselves with tales of adventure, those old folk-stories which have been traced by folklorists all over Asia, Europe & Africa. The Zulu word is identical with gam, a folk-tale or story, in Santali; so the custom of story-telling is at least as old as the Indo-Bantu family of languages. Furthermore, its history suggests that music & poetry ^{have been} cultivated by the Kolarian, Basque & Bantu peoples for over 30,000 years, as everywhere we find in the oldest types of folk-tales many lines of poetry & choruses interspersed with the text; & such of it as has survived to the present day is often most difficult to understand from the archaic forms of speech they are found to preserve. "To sing a tale" is still a common Bantu idiom for to recite an old tradition, (cf. Nyanya "Ku imba n'fau"), & in Santali the same expression is met with, viz., gam seren, "to sing a folk-tale", but this is ^{more} correctly applied to certain parts of the popular traditions which have communal choruses, or else contain poetic lines which the narrator intones as is done in the Highlands of Scotland. In Kongo, the word appears as samuna, story, folk-tale, & according to Dr. Bentley it strictly refers to those tales & traditions which are interspersed with songs. In Karanga, it becomes i-saumo, legend; & in Ganda an-rumo, tradition, the verb being fuma, to tell beast-stories. The root-idea of Santali gam is probably to 'speak low', as in gam-pis, talk privately; gam-hair, quiet, gam gun, still, quiet; gam-gondor, to mutter in low tones; but as the Bantu forms point to a root with a labialised palatal, the real meaning of Santali gam, Zulu tsumo might originally have signified some kind of narrative which was 'joined' or strung 'together', both prose & verse. Hence ^(the original root is more likely to be that of) Santali juma, united, joined, together; jumau, collect, with dual number jam-ka, two joined together; Zulu ulu-hume, an endless story, huma, to join or string together.

119. Medial y in Basque & h in Zulu are frequently dropped before liquids or when intervocalic; they are otherwise strengthened, & in Zulu a may pass into a click. Compare :

Sant. adgen, to disappear, to be spirited away (as of anyone carried off by an alligator or shark); Basq. ayegetu, aienatu, disappear; Sant. caandlom, tail; Basq. allia (= *lella); Zulu um-sila (= *hila-n);

" aullu, to scold, to scold, aullu-a, a scold; aullu-a, a scold;

IDB. KH = Sant. KH; Basq. K; Zulu G.

Santali.	Zulu.	Santali.	Zulu.
(Skr. khá, a wound)	ga	khájer, dagger	gaga, assegai
khanda, trench, pit	godí	khájao, ponder	gaga, observe
khander, ravine	isi-godi	akhor, a letter of	is-aga, word, name,
khau-ka, glutten	ili-govu	the alphabet	token, term
khali, vomit	gula	khawo, gormandise	gava, eat raw
khalka, edge, border	gu	khikari, emaciated	gaga
khel-du, dance	gi-da	khudhud, pound rice	ganda
khatakete, giggle	gi-gi	khufi, blood	gazi
khucha, khudi, hoe	geja	khunt-ut', tree-stump	isi-godo
khotrão, rub, scrape	gudala	khutshot, chatter	gedeze

124. The exceptions to this sound-shifting have already been shown to arise from the combinations kh or sq; e.g.

Sant. chádáo, chotak', to separate (Idb. *scheid, *scheid);
Zulu oaza, to separate, canda, to cleave.

Sant. khái, to rub the skin off; kolo, shaved bare; kondlor, having a shaved head (Skr. khilati, bald); Basq. choil, soil, bald, bare; Zulu owa-ta, to be bald; Idb. *skhal.

125.

Basque.	Zulu.	Basque.	Zulu.
kuya, pumpkin	gawu	kulu, cover	gogosa
ketu, quantity	gede	kota, pole, perch	godo
kikila, lean	gaga	kaizu, physique	gazi, comeliness
karrakatu, scratch,		kantei, corner	in-góni, -goni,
scrape	gudla	koner, diagonal	corner, angle
kali, kill	gile, die	(O.B. Kantiu; hence	a bend in a
	suddenly	Cantium, Kent)	river
kanti, depart	goduka,	karroin, ice (katro-)	godola, be cold
(Sant. ohhan, vanish)	go home	kofa, hollow	gumba, hollow out
konkur, doubled-up,	gongo-bala,	(Sant. khaup, hollow)	
crooked, bent	to flax the	apar, froth (kepar)	gwebu, froth, foam
(Sant. koko-so, sit	limbs of	khallu, skin	gwelo, shred of a
huddled up)	the dead		skin

126. The interchange of kh with k in Santali is as common as it is in Zulu; but this phonetic peculiarity must date from very remote times, can be proved by the difference of sound-change. Thus, Indo-Bantu KH may occur in Santali as k, or sometimes as kh when it has been affected by this aspirating tendency: when Zulu g & Basque k point to Idb. kh rather than k. As this remark applies to all the Stops, k, t, p, . g, d, b, the only explanation seems to be that the stops & aspirates had begun to interchange regularly before the Basques, Zulus & Santals had separated from one another.

Before a palatal sound, kh in Santal passes into chh, & into s before a dental sonant. Hence pokhac, posac, nourish, fatten.

Before liquids it may be dropped ; otherwise the liquid alone is omitted; e.g. haisi, risi, squander; khon, von, coarse (Basq. haretsi); khond, rond, discuss. When intervocalic kh may be softened to gh or g; cf. sagai, relationship, Sir. sakhyo.

127. IDB, GH = Sant.H (for gh); Basq. G; Zulu K.

Santali.	Zulu.	Santali.	Zulu.
hā-hankar, a desert	kangala	hara, crow	kula
haisa, bewail	kala, cry	haram, old; herah, great	kulu-n
haisa, a big jar	kansi, pot	hara, hill	(Konde, etc. Zulu)
hap', huak', eat	kams	hani, that	kona, that, there
hawe, cholera	kobe	hoe, to be, become	(ku, uta)
hawet', dry up	kocē, kocoza	hoe...hoe, either...or	kuko...kuko
hals, excavate	kela	hajar, 1000	kulungwane
hech, pluck leaves	ka	hadam, man, her wife	-kazi
hero, tortoise	kala, crab	hene-o (Loc.), in the arm	kono, arm
lams, before	loko-za, have	hath-lak', spirit	kwape
	a presentiment	hawah, flank	in-kwape
hende, black	kate, be	hoho, sunken	konga
	very black	hoh-har, father-in-law	um-lwe
homor, mourn	homololo, mourning	harop', ability	ubu-kali
huluh, jealousy	kwale	hunar, skill, art	kono
horok', visit friends	hukuleka, welcome	huka, short like bulls	konya, bellow
huri, to blow the nose	kealela, sneeze	hadam, early in the morning	kwi, rise early
hanhanso, jingle	kencosa	hūhū, the hooting of the owl	kwezi, morning star
			isi-kona, owl; kuku, fowl

128.

When initial h is a breathing & not truly consonantal in origin, it is not represented in Basque or Zulu. Thus: Santali hanka, arka, the Indian scaly ant-eater (Manis pentadactyla) appears in Zulu as is-ambano, the ant-eater or ant-bear (Cryptoropus Capensis) because the Santal h is ^{as}prothetic & not part of the root. This tendency to prefix h or w ⁱⁿ Xuxu, before words beginning with a vowel was previously shown to be common in dialect.

Before palatal y or i, Santali h becomes ch or ja: Basque g passes into j, & Zulu k into sh. Before dental sonants, h becomes s, g becomes z, while in Zulu k normally passes into s but sometimes into z. When soft g in Basque as an initial sound has been dropped, it will generally be found that Santali & Zulu reveal its former use; e.g.

Sant. holo, yesterday (IDB. *ghies); Zulu i-zolo; Basq. atzo (-*entao);
" hāhankar, a desert; Zulu kangala; Basq. engio, waste ground, from *gengile.
" hap', to eat, devour; Zulu sewuza, servuza, to crunch while eating (§.13).
By syllabic contraction, Zulu k disappears before other consonants; compare sika, to scatter, ulu-sapo (-sak-po), things scattered about. Compensatory lengthening of the root-vowel results from this elision. Similarly we get ukala, sabalala, to be scattered about; tombi, girl, tombazana, little girl (=tombi-lazana).

130.

With gh instead of h, however, compare Santali 'ghasien', to
break wind; Zulu suza, Swahili shuta: from Idh. *ghed-ska-; cf.
Greek $\chi\epsilon\sigma\omega$); and gorom, for *ghorom, hot, warm (Basq. garo, hot,
gori, glowing; Zulu ili-kosa, intense heat, is-ahgora, intense heat
of the sun; Idh. *gher, glow, be hot, warm); and gorom, grand-,
as in gorom-ayo, grandmother (Basq. ama-goya, Zulu u-name-kulu);
gorom-tet' naram, grandfather (Basq. aita-goya; Karagwe taten-kulu);
gorom-kora, grandson (Zulu zu-kulwana). Santali: *ghr-m, great, or
ghorom, is thus an earlier form of naram, old, great; & Basque goya
is an obsolete form (O.B. *goma, *gorim) cognate to Zulu -kulu.

131.

Idb. H = Sant. h(or ch); Basq. kh(k, ch); Zulu ch(g, or clicks).

Santali.	Zulu.	Santali.	Zulu.
hul, chal, condition	njalo, tans	shepre, flat-nosed	cifize
hon, child	ngane(=*ghane)	chahe, remains	ngabe(=*ghabe)
chutia, mouse	ngoso	chabhar, splash	ngambu, bubble
chuni, small	ncane	ach', jump	ega
chunchi, nipple	i-ngono	chae, luck, fortune	ce
Chore, a Santal septa	A-NGOMI	chachi, boil over	cifima, overflow
chopeon', suck	cembuza	chawak', pour, spill	capa
chol, fraud	cala	chitai, sign, mark	cwaai
chuitau, sprinkle	cela	chepende(=O), caterpillar	oimbi
chur, choke	xela	chepe(=O), reflect	cabanga, camanga
-ch' (infinitive-suffix)	-za; cf. cembu-za	(Skr. chāy, bushy)	goaya, coya, ncyancho
chapat(Skr. kṣap), to throw	cibi	chailak', whistle	owela
chewak', to chop	cuba	tahur, to tear	tsucula, cosula
		sufuk, to drip	contsa
		chamki, cow-tick	qashi

132. The history of Indo-Bantu h or k is not very clear; as from an early period the unvoiced palatal fricative seems to have been confused with palatal k & its compound sk, as well as the affricate ch or č. The majority of the above examples point to sk or ks, but how the Idb. sound was pronounced we do not exactly know. It was neither like English h or k, being apparently more guttural than the former & more fricative or sibilant than the latter. The h-sound of Bantu (not velar χ), when articulated as a palatal which is readily modified to sh before i, or dentalized before e or i, probably comes nearest to its original pronunciation.

Before u, Santali fricative h passes into w.

Sant. lawak' (= *lahyak'), to dangle; Zulu leec, longa;
" hawet', to dry up (= *ghahwet); " kooza.

But w may also represent hu(ghu) besides hu, ku; e.g.

rawal(O.S. *raghu-l), light, to make light; Basq. ahul, light (= O.B. *lagul); Zulu lula, light, easy (= O.Z. *lulula); cf. Skr. laghu.

133. Before dental sonants h passes into s, but into y before l-consonants. e.g.

Sant. chira, sira, a strip, edge, border; Zulu cilo;
" hiqir, sufuk', to drip; Zulu contsa, tontsa.
" pipit, to wink with both eyes; Zulu cwayiza;
" ayar, oblique, awry; Basq. okher, oblique;
" ayur, to lead, conduct; " ekharri, bring.
" ayup', evening, nightful; " ax, ats, night;
" uuu, to emit a throat-sound; sund, uvula; Basq. ganga, prob. for *khantha, uvula; Zulu u-govana(for *ghoghva).

Original h unmodified in Santali & Zulu occurs in a solitary exception, viz., Sant. hihiau(i-nasal), to neigh; Zulu nhi-nhi-za.

134.

Basque KH = Zulu KH (or substitutes).

Basque.	Zulu.	Basque.	Zulu.
kai (Sant. caij), thing	ci, ti	cheatv, crush	canda
knadoin, rope, halter	gōda	chehe (= khlene), tiny	noane
knino, perfume	qola	-cha, -chla (diminutive)	ocwa, Bushman
linnax, dirty	longo, dung	ncha-konde, the little	eiki-noane, the
knallu, pigskin	gwelo, skin	finger (ach, atz, finger)	little finger
nokau, fault	nango, to	chabal, flat, flat-nosed	cifisa
	disgust	churitu, deceive	cala, fault
(khina, to neigh),	nhinhiza,	chorte, drop (of water)	contsi, tortai
zamari-kina, to	to neigh	churatu, suck	oembuzu
neighing		changuru, crayfish	iwi-onnakezana,
(Zamari, horse)		(Sant. chafke, to lie	salamander;
		hid or in wait for)	oanga, lie hid

135.

IDR. Y. = Sant. y, j (or vocalised); Basq. (ai), (ia), (h), (u); Zulu (ia), (h), (h), or clicks.

Santali.	Zulu.	Santali.	Zulu.
jao, barley (IDR. *Yevola)	(Kosa)-	enoch' (= *yen-),	sing,
(Skr. java)	habile, oats	to dance	(O.S. khina)
("yah, hasten, speed)	ama-ha:	unum, sink	shona
("yayu, swift)	haha, haze	(O.S. *yuhom)	(O.S. khion)
("yā, to go)	hē, yā, za'	jelo, flesh, meat	in-cele
("yash, to boil)	cha, broil	(Lepana jia,	i-sinyo, tooth
("yusha, honey)	izi-nyosi	showing the teeth	Sina, grin
("yatna); at, zeal	nya, qo, thorough	(Skr. hridaye, heart)	tlisiyo
("yuj); joreo, join	swaca, tie; singa,	liver	tsimelo
jerkech', copulate	jaka	(fetter) na-ya, pity	mu-se, -nyu
("yuvan); juwan, young	-yane, -zane, -ano	joch', dripping	web ci
("yach); jachno, ask, beg	akusa	joboch', slushy	cibiza
banij, to trade	funisa	jiri, hiri, ooze	ci-ca
a- (causative prefix)	-isa, -aa	jharak', smoke	umu-si

136.

As j in Santali represents a great variety of sounds just as an does in Zulu, it is difficult to discover when it has the value of y-spirant; but Sanscrit throws a little light on its history as an independent consonant distinct from i.

As Santali ca sometimes represents original sk or ks, so also j may be a substitute for gx or gs; cf. raj, king, for *reg-s; rani, queen, from *regsnī. When the closely-related semi-vowel y becomes consonantal-i, it is responsible for the palatalisation of the sound with which it assimilates. The modifications to which i has given rise in Santali, Basque & Zulu have been already discussed at some length; & here one need only repeat that i is not to be identified with fricative y on the one hand, or with the heavy sonant î on the other. The difference is of great philological importance, as each of the three affects the various classes of consonants in accordance with their special characteristics.

137. Basque OH (or substitutes): Zulu KH (or substitutes).

Basque.	Zulu.	Basque.	Zulu.
gibel, liver (H. *leghe)	tsineko	oso, healthy	qata, sound,
gillikatu, kitzikatu,	kitaza	(Skr. yos, health; Sant. jor)	strong
(Sant. gutlu), tickle		thazteri (= gheth-), boil	osa, boil
ointzitu, dance	sine	antze, zeal, industry	ili-nge, anxiety
jarie, ooze, trickle	cien	sa, sa, jokha, to pair	zela, to pair
gozte, young	ziyane	(Sant. jora, a pair; Skr.	(of animals; in
osi, honey (Lunari)	swoni	yug-a, pair); said of	Zulu & Santali)
khadi-zu, 'nest-head'	honeycomb	birds in Basque.	
geza, gozo, sweet	khakhe, ^	garagar, barley (= ghagar-)	(habile, oats)
gudu, battle, fight	(Bantu fite,	amutu, bend; amil,	nkimbi, recoil,
(Skr. yudh, fight)	vita, zite)	rotation (Skr. yama-ka,	a turning back
amiatu (= ghamb-), lead	soma, to have	double, twofold)	on itself
the mare to the stallion	lowd	khachu, quick	um-hana
(Skr. yabh, copulate;	(sexual intercourse)	ukhan, possess, have	fuya
said of animals)	be	argi (obs.), noble; as in	um-Langu, a
herkeke, right, proper	lunga, good	len-argi, prince (Skr.	white man
(Skr. Arya, kind, pious)	right; ikh	Arya, noble, Aryan)	(O. S. 'Ikhv)

138. Several of the above etymologies are tentative but are given as examples of possible sound-shiftings representing the lost aspirate kh. Many of the Zulu words are difficult to trace in Bantu dialects; & until this can be done, so that an approximate idea of the Bantu types may be obtained, we are obliged to accept Zulu roots at their face-value. Where they have been subjected to mutations in Zulu & Hlonipa which are a clue to the character of the sound, the difficulties are less formidable. In the previous pages, therefore, the author has considered it more important to trace the influence of palatalisation, labialisation, & nasalisation on Zulu sounds, without regard to other Bantu languages; & by this method to rebuild Zulu (or Old Zulu) types or the ^{correct} forms of words, before applying the laws of sound-change which govern the Holarian, Basque & Bantu languages, & are a sure test of the accuracy or inadequacy of all methods which may be adopted. The author does not guarantee the correctness of all his etymologies, as his knowledge of Zulu, Basque & Santali for a period of 20,000 years is very defective; but as this Thesis is a demonstration of scientific methods applied to Indo-Bantu phonetics, absolute accuracy in etymology is not the primary object so much as the testing of these methods & principles which can alone establish INDO-BANTU COMPARATIVE PHILOLOGY, THEORETICAL & APPLIED, on as solid a basis as it is humanly possible to attain.

1

(As the subject of this Thesis is limited to the discussion of the principal sound-shiftings in Santali, Basque & Zulu, the author has deemed it necessary to omit subsidiary chapters on the velar & labio-velar gutturals, liquids & nasals sonant & consonantal, the Indo-Bantu sonants & the laws of the vocalic system, the history of the Indo-Bantu system of tones, etc.)

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